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ABSTRACT

This summary reviews the recommendations of the first annual report, describes the Education Satellite Communications Demonstration, and discusses its impact on Alaskan affairs and institutions. Based on this, it presents educational alternatives and new experiments appropriate to Alaska's needs in three areas: (1) physical implementation of the schools and curriculum, (2) achieving teacher effectiveness, and (3) effective administration processes. The implementation and implications of giving control to the villages, a major concern, is discussed in relation to various recommendations. Finally, operational answers are given to several questions regarding NIE investments in this and in similar satellite demonstrations. A chronological history supporting the impact discussion is included. (DAG)

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IMPLICATIONS OF THE ALASKA EDUCATION SATELLITE COMMUNICATIONS DEMONSTRATION FOR TELECOMMUNICATIONS & EDUCATION POLICYMAKERS

EXECUTIVE SUMMARY & SUPPLEMENT

Prepared for:

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PREFACE

Practical Concepts Incorporated (PCI) is under contract to the National Institute of Education (NIE) to evaluate the Experimental Satellite Communications Demonstration (ESCD) in Alaska.

In the course of this evaluation it became clear that there are certain key questions related to this evaluation that were of pressing interest to the National Institute of Education, the State of Alaska, and the international community that is considering investment in satellite or, more generally, telecommunications-mediated social service delivery.

This report is a supplement to PCI's first annual report under its contract with NIE and is explicitly addressed to the three above mentioned audiences.

In order to respond directly to issues of interest to these audiences, we have also drawn on related work done by PCI. We refer specifically to a study performed for the Agency for International Development (AID) which attempted to develop a paradigm for assessing the cost-effectiveness of intermediated telecommunications in "third world" situations. This document is therefore a synthesis not just of PCI's evaluation study in Alaska, but of a number of related activities.

This report both summarizes and supplements PCI's first annual report and contains the following sections:

Section I:	Introduction
Section II:	ESCD Impact on Alaskan Affairs and Institutions
Section III:	Educational Alternatives and Experiments Appropriate to Alaska's Needs
Section IV:	Local Control: Implementation and Implication
Section V:	Questions and Answers

a. For Federal Administrators (e.g., NIE)

b. For Alaskans

c. For the Internationally Minded

PCI thanks our NIE technical monitor Mr. D. Falk for his guidance in helping clarify the issues that are of interest at this time.

SECTION ONE

INTRODUCTION

A. A BRIEF DESCRIPTION OF ESCD/ALASKA

A summary description of ESCD/Alaska is presented in Figure I-1. There were four major programming efforts, six "special features," and 15 receiving sites in rural Alaska. The information presented in Figure I-1 is elaborated on briefly in the paragraphs which follow. The purpose is not a thorough description of ESCD/Alaska's operations, but merely to provide sufficient background for understanding the body of the First Annual Report on ESCD/Alaska. (For a detailed description of ESCD/Alaska operations see the "ATS-6 Health/Education Telecommunications Experiment" final report by the Alaska Office of Telecommunications submitted to NIE in September, 1975.)

1. Major Programming Efforts

The Basic Oral Language Development program was titled "Amy and the Astros." It was set inside a spaceship containing two astro children puppets and a robot puppet. An English-speaking Alaskan woman (Caucasian) discovers the spaceship, enters it, and teaches the astro children English. The program was aimed at 5-7 year old Alaskan Native children. One program was shown twice each week, totalling 32 programs.

The "Right On" health series was set in a typical village health aide's office, with a Native woman health aide giving advice and assistance to two animal puppets--a moose and a beaver. A germ puppet also played a prominent role in the programming. Each program centered on one specific

Figure I-1a: EDUCATIONAL SATELLITE COMMUNICATIONS DEMONSTRATION IN ALASKA

4 Major Programming Efforts

- Basic Oral Language Development (English for 5-7 year olds).
- "Right On" (health for 8-10 year olds).
- Alaska Native Magazine (public affairs for adults).
- Teacher Training.

Special Features

Technological

- Interaction
- 4 Language Channels
- Inexpensive Receiving Equipment
- Color Video

Village Involvement

- Consumer Committees
- Utilization Aides

15 Receiving Sites (Figure I-1b)

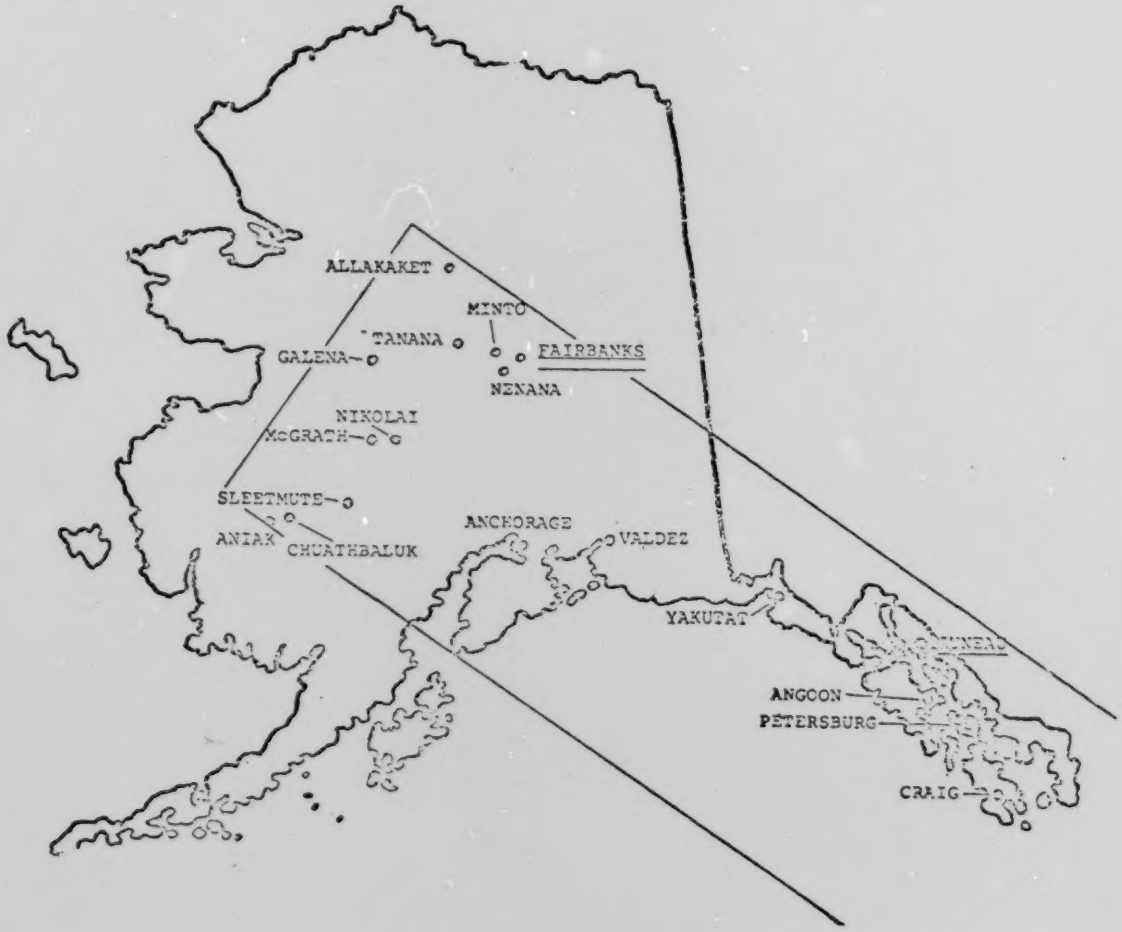
Major Grantee

The Alaska Governor's Office of Telecommunications

Figure I-1b:

ALASKA ATS-F FOOTPRINT

° Fairbanks and Juneau are program transmission points.



health problem. The program was aimed at 8-10 year old rural Alaskan children. Two programs, one of them "off the shelf," were shown once each week, totalling 64 programs.

The Alaska Native Magazine was viewer-defined. It was a 60-minute public affairs program devoted to news and events that affect Alaska's Natives. In-studio interviews were combined with on-location film footage to produce a combination documentary/round table discussion/ interview format. Also included were such specials as: the inaugurations of President Ford and Governor Hammond. One program was shown once each week, totalling 32 programs.

"Tell and Show," the major teacher training effort, consisted of a lecture series titled "Motivating Children to Learn," by Dr. Rudolph Dreikurs, and a number of round-table discussions. 28 programs were broadcast.

2. Special Features

Interaction consisted of TV and audio broadcasts from central studios in Juneau and Fairbanks with questions from the villages relayed via the ATS-1 satellite. The children's programs contained a 10-15 minute interactive period after each session. More time was allowed for adult participation in the Alaska Native Magazine series.

The power radiated by the ATS-6 is strong enough for high quality color video to be received at simple, inexpensive ($5000) receive-only earth stations whose output feeds conventional TV monitors. Four simultaneous audio channels are provided and were used for segments of the Alaska Native Magazine broadcasts. Koyukan and Yupik were transmitted along with English.

The Governor's Office of Telecommunications (GOT) established Consumer Committees (composed of ATS-6 footprint community residents) to give

specific input to program planning during all stages of design and to ensure that the committee-chosen objectives and content were fully carried through in program production.

The GOT hired trained community aides (Utilization Aides) at all sites. Their purpose was to publicize program schedules, gather data, and to ensure that equipment was operating adequately and would be handled properly and consistently by a single village resident trained in its use.

3. Receiving Sites

The number and choice of receiving sites were severely restricted by the ATS-6 footprint (see Figure I-1b) and available funds. Site selection guidelines published in the 1972 Program Plan were: (a) anticipated significance of satellite technology in meeting the needs of the site; (b) a population large enough (perhaps 150 people) to develop ample data; (c) degree of interest shown by prospective participants in taking part in the experiment; and (d) availability of a school, community hall, or other facility suitable for public use.

4. Grantee

The GOT was the grantee of funds from HEW. Planning and management of the ATS-6 ESCD/Alaska was the responsibility of the GOT as well as installation and maintenance of the system. Major subcontractors were:

- Northwest Regional Educational Laboratory--Design of children's programs.
- KUAC/TV--Design of Alaska Native Magazine.

- KUAC/TV--All program production.
- GOT--Production of teacher training programs.

B. RECOMMENDATIONS OF EFFORT TO DATE

Presented below are the recommendations emanating from the work covered by the PCI analysis of the ESCD (Volume 1--The Implications of the Alaska Education Satellite Communications Demonstration for Telecommunications and Education Policy Makers).

1. In the study of satellite television and the media requirements of rural Alaska, there were three aspects that PCI studied:
   a. Criteria for Investment in Satellite Television.
   b. Mandatory Components for a Satellite Television System
   c. Necessary Complements to a Satellite Television System.

The "Recommendations" and the "Basis in ESCD Experience" are as follows:

RECOMMENDATIONS	BASIS IN ESCD EXPERIENCE
1. Undertake telecommunications demonstrations in rural Alaska only when there are resources and commitment for putting aspects of the demonstrations which users deem successful directly into operations.	Rural Alaskans resent being given access to satellite television, only to have it taken away. Since effective demonstrations require enthusiastic participation on the part of users, demonstrations perceived by rural Alaskans as temporary are not a good investment of taxpayers' money.
2. Undertake satellite television operations only when they can be justified on the basis of cost-effective, timely access to programming.	Satellite television cannot be justified on the basis of real time viewing, live video programming, or live interaction incorporated with video programming. The remaining function performed by satellite television is access to programming.
3. Television sets must be placed in village community centers as well as village schools.	Placing sets solely in the schools makes many potential adult viewers uncomfortable, can give schools actual if not legal control over village television, and therefore goes against the current trend of giving Natives control over operations which affect them.

4. Television programming for rural Alaska must be accompanied by resources and explicit instructions for video-taping and viewing at the villages' convenience.	Both inside and outside the classroom, the value of flexible scheduling exceeds the value of real time viewing. Television which attracts the highest participation and disrupts life the least in the villages must allow customized scheduling for each village and classroom.
5. As a complement to satellite communications, regional media networks must be developed to meet the demand for region-specific programming.	Region-specific demand has several sources: Varying ideas on how much television is good for rural Alaska; Interest in regional topics and issues; Native Language broadcasting; Regionalization of school systems.
6. As soon as there is satellite telephone, audio interaction should be used without video programming.	ESCD users have innovative ideas for audio interaction use. For the cost of telephone calls, the following will be possible: phone-in conversation radio programs, conference calls to hold meetings, audio management of media services, and education materials distribution.

2. In the study of control of Alaska's rural media by the villages, PCI focused on these aspects:

   a. A Strategy for Developing Alaskan Native Programming Capability.
   b. A Strategy for Giving Consumers Veto/Approval Control Over Media Services.
   c. A Plan for Day-to-Day Management and Monitoring of Media Service to Rural Alaskan Villages.

   These are the resulting recommendations:

RECOMMENDATIONS	BASIS IN ESCD EXPERIENCE
1. To give Alaskan Natives direct participation in programming, the appropriate investments are in regional and local media networks and programming.	Programming by and for Native Alaskans is a high leverage investment in cultural price and awareness. However, at present there are very few Native Alaskan media professionals. Regional networks would provide more low level jobs for moving Natives in and up in the media than would the same coverage via satellite, and they would require less slick professionalism. It seems probable that satellite television would inhibit development of regional networks, but that regional networks would stimulate healthy growth of satellite programming if regional networks precede the satellite system.
2. ESCD Consumer Committees (including Utilization Aides) should be given funds for buying programming on behalf of rural Alaskan villages. Purchase of programming should be made on the basis of samples submitted by potential programmers in competitive bid fashion. Teachers should participate in the Consumer Committee as advisors on children's programming.	Under the ESCD arrangement, Consumer Committees only advise programmers, and represent only token control. They do, however, represent a valuable investment in consumer education which must be capitalized on. The only way to give villagers control over rural media is to give them real approval/veto power, which means purchasing power. Teachers as advisors is appropriate since Consumer Committees represent the teachers' constituents, i.e., the parents of the children they teach.

3. Give each rural Alaskan village funds for the hiring and training of a Media Manager. The Media Managers must be employees of the villages, not of the State Government.	Whoever has media access to rural Alaskan villages has a virtual monopoly. Therefore, there must be the analogue to the knobs on our radios and televisions for whole villages. ESCD experience with Utilization Aides has shown that Media Managers must perform duties in the following areas: tell programmers what media services villagers like and do not like, and constantly keep villagers aware of what media services are available; coordinate viewing of adult programs and activities for children during adult programs; provide leadership, especially if the television set is in the school; collect and report local news for media transmission; organize visits by television film crews.

3. In the study of lessons learned about programming for rural Alaska, these are the focal points:

   a. Strategies for Allocating Programming Resources.
   b. Specific Areas for Future Programming.

These are the resulting recommendations:

RECOMMENDATIONS	BASIS IN ESCD EXPERIENCE
1. Commitment to broadcast material and commitment of resources to new programming must be separate decisions. The commitment to new programming must be preceded by a survey of available programming.	ESCD user reaction to programs which overlapped with existing available programs, and to programs which filled a curriculum need were quite different. Obviously, there is no sense funding new programming when satisfactory material already exists.
2. If "culturally relevant" programming is the objective, then the appropriate investment is in training Alaskan Native media professionals.	ESCD programming and production staff was overwhelmingly white, and cultural relevance was not seen by users as a salient characteristic of the children's programming. The important dimensions of Alaskan Native cultures are social and behavioral, and therefore subtle. It would seem easier to teach programming to people who know the subtleties than vice versa.
3. Telecommunications in rural Alaska should take as its mandate: solution to the "high school problem." Three alternatives for augmenting village high school curriculum are: materials distribution of already existing programming, teacher-sharing via audio presentations and supervised interaction, and new programming on Alaskan Native History.	Sending rural Alaskans away from their villages to high school has tragic consequences. Therefore, village high schools are being established. However, villages have neither the expertise nor the educational materials available to deliver full high school education. Alaskan Native History is an area where high school students might use audio interaction to develop their own programming.

4. Government officials and other people who affect the lives of rural Alaskans should be interviewed for television transmission in a village setting, in front of a village audience which asks questions and speaks up when they do not understand. (Media Managers must take a leadership role here.)	Using the current Alaska Native Magazine format, white administrators and city Natives do not talk so village audiences can understand. Perhaps a solution is for the speaker to see, hear, and feel how an audience like the one he is addressing via television reacts.

SECTION TWO

ESCD IMPACT ON ALASKAN AFFAIRS & INSTITUTIONS

ESCD was a demonstration and proof that state-wide educational broadcasting is not just possible (which has been known for decades), not just inevitable, but imminent. It is not surprising then, that the ESCD appears to have had an impact on the way institutions and individuals involved in telecommunications--and educational activities--prepare to use that forthcoming potential and direct their activities to influence outcomes in directions appropriate to their missions. Some of the findings related to this important issue--changes in institutions and institutional relations--are summarized in the following sections.

A. ESCD IMPACT ON ORGANIZATIONS

1. ESCD contributed to Alaska's ability to "stand-up" to RCA Alascom/Globecom and negotiate for a suitable commercial telecommunications system for the state.

This is the major impact the demonstration has had on the State of Alaska. The ESCD provided evidence that small, inexpensive earth stations could deliver commercial-quality communications, both audio and video. Specifically, one can argue that the following effects can be attributed to the demonstration:

- Made influential people and organizations (e.g., newspapers) aware of the range of capabilities of the technology to support education and health.

- Made people aware that the benefits could be realized with inexpensive, easy-to-maintain equipment.
- Provided Alaska Office of Telecommunications (OT) with hands-on experience with the technology as well as practical experience in the installation and maintenance of the hardware.
- Provided data that showed that small, inexpensive earth stations could do the communications job and permitted OT to successfully contest RCA's expensive system to the satisfaction of the FCC.
- Helped the State of Alaska in its negotiations with RCA Alascom which culminated in the installation of small earth stations in village Alaska.

The basis of Impact #1 is documented in the brief history compiled from selected critical events of Volume II, Section 3 of the evaluation document, and presented in Appendix 1, Attachment #1 of this document. Documentary basis for these critical events can be found in Volume II, Section 3E.

2. ESCD contributed, perhaps substantially, to the direction and rate of growth of the Alaska Office of Telecommunications.

Alaska's interest in satellite communication extends back to 1968. Studies primarily concentrated on the educational uses of satellite communications. It was not until 1971 that actual experiments were begun using the ATS-1. However, these were voice experiments primarily concerned with health and managed by the Lister Hill National Center for Biomedical Communications. It was in July 1971, when the capabilities of the ATS-F for educational television came to the attention of Governor Egan, that steps were taken to formalize an organization whose function was the application of satellites to Alaska's problems. Specifically, the ESCD contributed to:

- The designation of the first person (Arnold of AEBC) responsible for experimental design and programming.
- Placing satellite experiments under the control of the GOT.

- Designation of an individual in GOT as satellite experiments coordinator.
- Encouraging GOT to become involved with Communication Technology Satellite and expanding its functions to include the means to bring as many agencies (Alaskan) as possible into the program.
- Providing impetus for the GOT to become involved in program production to meet village educational needs.
- Providing the experience necessary to enable GOT to procure satellite earth stations for its own telecommunications systems.

The above are documented in Appendix 1, Attachment #2.

3. ESCD was a precipitating agent allowing the State of Alaska to become involved in the production of programs specifically for its rural populations.

As the plans for the ESCD progressed, GOT became convinced that there was no suitable programming tailored for the audiences they were trying to address nor to meet the special needs imposed by interaction. As a result, they took it upon themselves to produce the series required for health education, basic oral language development, and adult involvement.

This is documented in Appendix 1, Attachment #3.

4. Alaska becomes a charter member of the Public Service Satellite Consortium dedicated to the use of satellites for social service delivery.

Recognizing that the Federal Government's policy is solely to sponsor experimentation leading to operational systems which will be supported by the users, Alaska has joined with other deliverers of social services in an attempt to aggregate a market large enough to influence the

future course of commercial satellite communication development and to capitalize on economies of scale which would result therefrom. See Appendix 1, Attachment #4.

5. Alaska convinced of the value of educational satellite experimentation--willing to assume progressively larger share of costs.

One measure of the perceived worth of a product to a client is how much he is willing to pay for the product. The State of Alaska appears to be convinced of, or committed to, the soundness of this product. This is demonstrated in the following critical event:

March 26, 1975 [C600]

Northrip (GOT) letter to Arundel (NIE) enclosing amounts Alaska would request from NIE and would provide from State resources for educational satellite experimentation, FY '76 to FY '79. Revises state's share for FY '76 to 22% (of $1,260,397). Confirms phone call of Feb. 13, which indicated state would assume gradually larger shares until it reaches 100% (of $1,000,000) in FY '79.

Even if valid, this "finding" must be viewed carefully. It is not proven here that Alaska's apparent commitment to satellite experimentation will prove a beneficial course of action. We suggest only that ESCD may have been instrumental in causing such experimentation to be perceived as valuable.

6. Other indicators of lasting effects derived from ESCD-Alaska.

It is not possible at this early stage to predict that there will be additional lasting effects. There are, however, indicators of such impact. These consist mainly of requests for programming produced especially for ESCD and a growing awareness and vocalness on the part of influential persons and organizations for a continuation of

experimentation of the kind exemplified by ESCD. A listing of some of these indicators is included as Appendix 1, Attachment #5.

This finding should be viewed very carefully. Absent a long-range plan for experimentation and analysis, but given only political and bureaucratic pressures for further "ESCD" experimentation, there is high probability that resources will be wasted. Therefore, it is possible that ESCD has stimulated demand for experimentation that will ultimately prove to be of low value.

In addition to demonstrable impact, there is inherent in the chronology a number of lessons to be learned about demonstration management and planning. These are considered to be sufficiently important to be included in this section. The lessons learned should receive prime consideration in all future experimental and demonstration efforts and not solely to those involving technology applications.

B. EXPERIMENT PLANNING & MANAGEMENT

1. Planning and basic funding responsibility.

ESCD implementation was marred by problems that PCI believes could have been avoided by following basic rules of planning and management.

a. Detailed and complete project plans must be developed by the experimenters and project officer (Federal level) prior to commitment of funds.

b. Fund commitment covering the entire approved project must be made at the very outset.

c. There should be a single agent at the Federal level responsible for funding.

Most problems that beset the ESCD can be attributed to the three points set forth above. The documentation record (refer to Appendix 1, Attachment #6, chronological history) shows that the failure to follow the above

rules resulted in project delays, generation of discontent, poor programming, etc. Specifically, we attribute the following effects to violation of the above tenets:

- Planning proposals for initial year's funding (FY '74) were submitted periodically from 3/72 through 8/73 (educational experiments) due to changing organizational responsibility at the Federal level.
- Project responsibility changed organizational hands three times at the Federal level (to say nothing about people).
- Funds, other than for planning grants, were not released until December 1973, just 5 months before the launch of ATS-F.
- Three agencies were funding Alaska at the same time--HEW/OT, USOE and/or NIE and Corporation for Public Broadcasting.
- Congressional battles with the White House over the HEW budget made it impossible at one point to guarantee payment to Alaska for programming services.
- Final funding was uncertain until mid-February 1975, 4 months before the end of the project.
- Program production funds were not made available until March 1974, 2 months before satellite launch.
- In the early days of the program, two organizations in Alaska simultaneously sought funds from HEW for ATS-F for educational technology planning.

In reviewing the historical chronology, it may be that the reader will detect other problems not listed above. Suffice it to say, however, that these were enough to keep tempers short and further complicate an already complex demonstration.

2. <u>The experimenter's focal point: A single individual or organization</u>.

The federal manager's problem in the experiment was analogous to that faced by the Alaskan Project Manager when he had to deal with several

Federal agencies for funding. During the demonstration the management focus became so diffuse that the Federal Project Officer had to force selection of a focal point in the GOT. This is documented in Appendix 1, Attachment #7.

3. Responsibilities of the lay Consumer Committee.

The chronology indicates that there was mixed response regarding the effectiveness of Consumer Committees:

- Consumer Committees appear to function adequately in (1) determining goals and priorities of a series, (2) characterizations, (3) final program design, (4) lesson sequencing, (5) series titles, (6) canned materials, (7) best receiving time for various audiences, (8) settings where action takes place, (9) pass-on language use (e.g., bureaucratic language, (10) whether production is too "slick," (11) selection of topics for nonformal education like those produced for Alaska Native Magazine, (12) program pacing, and (13) set design.

- Areas where experts expressed concern regarding committee effectiveness: (1) program outlines, (2) puppets, (3) lack of awareness of cost of some desired features, and (4) number of characters for a single program.

Several other recommendations were offered in the chronology, to overcome shortcomings noted in dealing with Consumer Committees:

- To help the committees make "realistic decisions," several experts should be available to explain the consequences of the preferred and second or third alternatives.

- A group authorized by the Consumer Committee to make decisions should be available during vacation periods.

The chronology applicable to this discussion is found in Appendix 1, Attachment #8.

4. Recommendations about the use of site review teams.

The following are recommended guidelines regarding the use of site review teams:

- Members of the site team should be briefed on all experiment objectives (in this instance that telecommunications needs other than education were involved.
- Team charter should be made known to those being visited as well as the site team well in advance of the first visit.
- Desired decision elements and the limitations which constrain these decisions (e.g., delaying funds when time is critical to the entire project is not an acceptable recommendation) should be defined.
- Recommendations of the site team should be disseminated to all concerned parties as quickly as possible.

The consequences of not following the above rules were to create conflict between experimenters and project officer, infringement on the stated prerogatives of the Consumer Committees, recriminations. These effects and others are amply documented in Appendix 1, Attachment #9.

SECTION THREE

EDUCATIONAL ALTERNATIVES & NEW EXPERIMENTS APPROPRIATE TO ALASKA'S NEEDS

A. EDUCATIONAL ALTERNATIVES & NEW EXPERIMENTAL MODES

There is concern that the small secondary schools in Alaska as currently envisioned will not be able to provide quality education. Conventional solutions are costly or otherwise impractical, yet there are no promising innovations on the horizon. It is PCI's hypothesis that should the Federal Government address Alaska's secondary school problems by providing mechanisms and a climate supportive of local innovations--providing tools and guidelines, but letting the people themselves innovate, then by testing and modifying system models the most satisfactory solution will be obtained.

Analysis has identified three key problem areas. Synthesized solutions should attempt to accommodate all of them:

1. Physical implementation of the schools and curriculum.
2. Achieving teacher effectiveness.
3. Effective administrative processes.

The manifestations of these problem areas and elements of potential solutions are listed in the following tables.

Table III-1 reflects the negatively-valued experiences parents have had with boarding schools, with children away from home for extended periods of time and not receiving parental guidance. It also demonstrates realism, a recognition of the real-world situation--i.e., that youngsters growing

TABLE III-1

PERCEIVED IMPLEMENTATION

Problems Identified by Alaskan Communities & Organizations	Solution Elements Identified by Alaskan Communities, Orgs., PCI
1. Parents desire students to live at home.	1. Dispersed formal classrooms - Correspondence courses - Radio courses - Itinerant instructors
2. Provide diversified classical curriculum.	2. Coordination and sharing of resource materials - Development - Purchase
3. Students introduced to a variety of vocational and life-style options.	3. Exposure to other societies
4. Students graduate with saleable skills.	4. Local work-study programs.
5. Students graduate with ability to survive in a bi-cultural society (epitomized by village and city life-styles).	5. New curriculum emphasizing job preparation and life skills.

up will be faced with the decision of earning a living in the village or in metropolitan areas. Thus the emphasis on practical skills rather than solely on preparation for college.

Table III-2 reflects the many poorly-perceived experiences the "bush" has had with transient teachers. It recognizes the need for a broad education but also realizes that a proper staff to train 30 or 40 school students (not unlikely) is economically undesirable if not unfeasible. Lastly, it notes that full use has not been made of Native instructors.

TABLE III-2

ACHIEVING TEACHER EFFECTIVENESS

Problems Identified by Alaskan Communities & Organizations	Solution Elements Identified by Alaskan Communities, Orgs., PCI
1. Most instructors from lower 48. Because of different cultures, they become effective near end of stay (1-2 years).	1. Training plus a continuing flow of materials for instructors to deal with bilingual/bicultural situations.
2. Making cost-effective a teaching staff with sufficient subject diversity for small student population.	2. Materials and training for instructors to help cope with a variety of disciplines.
3. Training native instructors to certification w/o requiring that they leave village positions.	3. In-service training/certification of native instructors.
4. Maintaining contact with new teaching techniques and methods.	4. Conferences to familiarize instructors with programs and teaching methods developed outside their own regions.

Table III-3 rightfully notes the need for coordination and cooperation to aggregate a critical mass (market) in order to be heard when dealing with the private and public sectors, the need to share experiences, the desire for local input, and a mechanism for implementing the best features of school system models which will evolve and must be more thoroughly tested over the coming years. Many of the school districts are now aborning, and most of them must cope with the problems of low population density, an aware constituency, and the special needs of the students in order to survive.

Elements of solutions to these problems involve a high component of information dissemination and, in the main, between groups of dispersed individuals. Therefore, a possible solution exists in the use of telecommunications to bring these isolated groups together. Studies of more than 35 world-wide case histories, plus the ESCD experiences, can provide guidelines for the application of telecommunications to the solution of the small secondary school problem. It has been demonstrated that the presence of one or more of the following factors almost guarantees the cost-effectiveness of this approach over more conventional solutions:*

1. Large physical area occupied by scattered population clusters.
2. The knowledge separation between on-site service providers and the source of expert providers is relatively large.
3. Time is critical.
4. Transportation infrastructure is perceived to be inadequate, i.e., it cannot provide timely access to services.

In Alaska, satellites can provide the necessary infrastructure for the majority of communication needs. Therefore, recognizing that building expectations without providing the means to carry on into an operational mode after the experimental tools and funds are removed is counterproductive and even

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* "Evaluation of Two-Way Telecommunications Systems for Interaction Between Professionals for Delivery of Social Services to Rural Populations." Report to AID under Contract # AID/otr-C-1377.

TABLE III-3

EFFECTIVE ADMINISTRATIVE PROCESSES

Problems Identified by Alaskan Communities & Organizations	Solution Elements Identified by Alaskan Communities, Orgs., PCI
1. Statewide curriculum coordination.	1. Effective information exchange process.
2. Program and funding request consolidation for presentation to legislature.	2. Continuing and in-service training.
3. Sharing and solving common problems (e.g., purchasing).	
4. Effective feedback from constituency--village level.	
5. Continuing dialog between building administrators and district superintendents.	
6. Continuing education of administrators.	
7. Coordination of educational research requests.	
8. Means for implementing successful models: - information dissemination - cooperation	

destructive, it is important that tools such as the ATS-6 and CTS be used in a mode which will most probably be duplicated commercially in the near future. Where possible commercially available satellites could be used.

The possible set of solution elements were defined as providing most satisfactory answers to the problems enumerated. The fit between possible solution elements and proven telecommunications applications is shown in Table 4. The examples listed under the column titled "SUCCESS" are representative and do not constitute an exhaustive listing. Descriptions of the programs, some of which have been in operation for decades, can be found in the report referenced in the footnote on page 4.

B. EXPERIMENTAL MODELS FOR A SMALL SECONDARY SCHOOL SYSTEM

Although the possible set of solution elements defined previously includes some 11 items, it is seen in Column 2 of Table 4 that the applicable telecommunication support modes number five:

1. Student education (dispersed classroom).
2. Materials distribution.
3. In-service training.
4. Conferencing for administrative purposes.
5. Some form of the Rural Radio Forums.

Detailed analysis of experimental and operational telecommunications-delivered social service systems throughout the world have shown that radio-mediated services of the kind exemplified in items 1, 3, 4, and 5, in both rural and urban areas, have been equally or considerably (> 10:1) more cost-effective than conventional delivery systems. In a rural environment, in-service training (3) and conferencing for administrative purposes (4) have been the most cost-effective services in the education field. Materials distribution has been shown by the ATS-6 experiments to be very

TABLE III-4

APPLICABLE TELECOMMUNICATIONS MODES

SOLUTION ELEMENTS FROM TABLES III-1 - III-3	DIRECTLY APPLICABLE TELECOMMUNICATION SUPPORT	EXAMPLES OF SUCCESSES* ACHIEVED ELSEWHERE IN THE WORLD
A. PERCEIVED IMPLEMENTATION		
1. Dispersed and formal classrooms	Student education (dispersed classroom)	Australia School of the Air.
2. Coordination and sharing of resource materials	Materials distribution	WAMI (ATS-6); Satellite Technology Demonstration; HOPE
3. Exposure to other societies		
4. New curriculum emphasizing job preparation and life skills	Cooperative curriculum development and modification	WAMI (ATS-6); New Hampshire/Vermont Interactive TV Network
5. Local work-study programs		
B. ACHIEVING TEACHER EFFECTIVENESS		
1. Training plus a continuing flow of materials for instructors to deal with bilingual/bicultural situations	In-service training Materials distribution	AESP; West Virginia Univ. health professional education; ATS-1 nurse education. Same examples as in A.2.
2. Materials and training for instructors to help cope with a variety of disciplines.	In-service training Materials distribution	Same examples as in B.1. Same examples as in A.2.
3. In-service training/certification of native instructors.	In-service training Materials distribution	Same examples as in B.1. Same examples as in B.2.
4. Conferences to familiarize instructors with programs and teaching methods developed outside their own regions.	Conferencing	WAMI (ATS-6); National Institute for Allergies and Infectious Diseases (ATS-1).
C. EFFECTIVE ADMINISTRATIVE PROCESSES		
1. Effective information exchange	Conferencing Developmental Process	WAMI (ATS-6); Veterans Administration (ATS-6); National Institute for Allergies and Infectious Diseases (ATS-1); ATS-1 Alaska Medical Network. Rural Radio Forums
2. Continuing and in-service training.	In-service training materials distribution	Same examples as in B.1. Same examples as in A.2.

* Success is defined as that which has proven to be cost-effective and/or provided user satisfaction.

satisfying to the user population and that under certain specified conditions can also be cost-effective.* The teaching of a number of classes simultaneously has not proven successful in either Alaska or Australia. However, the Royal Flying Doctor School of the Air, which has been functioning in Australia for 20-30 years, is indeed cost-effective. This experience should be directly applicable since it involves a total of 10-15 students located at many different sites interacting with a remote instructor in the same way as in a classroom situation. The Australians were being very conservative, estimating that a group of more than 15 students would be too large and thus prevent a free flow of information and exchange of ideas. Rural Radio Forums have been used by central authorities to elicit feedback from the people on matters of importance to them. These forums have been in operation for decades in more than a dozen countries. The major problems have been associated with delays in feedback from the population and the response time of the central authorities. Both of these problems can be alleviated by using a radio-mode (or telephone) for feedback.

C. SMALL SECONDARY SCHOOLS: PRIMARY EXPERIMENTAL EXTENSION

The remainder of this discussion is devoted to providing ideas and guidelines for experiments which could be conducted in seeking a solution to the small secondary school problem. This approach is consistent with our belief that a rigid set of experiments and procedures would inhibit innovation by those directly affected.

The first area, that of "perceived implementation" schemes, provides the most fertile ground for innovation. The situation in Alaska differs from Australia in that the student population to be served is larger, that a number of physical buildings do exist and probably others will be built, and there is a history of providing teaching staff (Native and

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*"Implications of the Alaska Education Satellite Communications Demonstration for Telecommunications and Education Policymakers." First Annual Report, Volume I, Contract # NIE-C-74-0148, pp. V-64 - V-74.

non-Native) for small clusters of students. Coupled with this is the desire that students acquire job-relevant skills before graduation.

Assuming that the Australians were conservative in restricting the number of students per radio class to a maximum of 15 and that in Alaska we are dealing with an older and more mature student body, a maximum of 40-50 students/class may be a reasonable starting point. The approximate number of students for which this approach is desirable is several thousand. It is not practical to handle via radio all students, at all grade levels, for all coursework. Therefore, this presents a second reason for developing a new curriculum in addition to the desire to prepare students with saleable job and life skills. A compromise between time spent learning in the village and time spent at some central location must be found which is acceptable to the parents and compatible with educational standards. The basic model may be a mix of radio and mail correspondence, periods spent at a central facility for hands-on activities (labs and acquiring manual skills), and periods of applying skills gained at local industries in or near the students' villages. The details of the initial mix of activities would be defined during "Concept Formulation and Refinement."

Telecommunications support for the dispersed classroom would take the form of a short lecture period followed by questions from the students for the instructor. Student discussions are helpful in the learning process and should be permitted but must be controlled. To minimize communication costs, lesson materials should be sent to the students prior to the satellite-interaction thereby restricting that interaction to emphasizing key points, questions and answers, and general discussion. Meetings may be held once, twice, or more times a week. The telecommunications option available are ATS-1, ATS-6, CTS, or possibly the Alaskan commercial health channel which has the broadcast mode capability. The advantage of using a commercial vehicle is obvious--it promises continuity of service beyond the period of NIE sponsorship.

Many of the recommendations of Volume I are concerned with media, program development, and local prerogatives in the purchasing of educational materials. To be an attractive market, it would be advantageous for

school districts to coordinate material purchases so that a given program will be useful to a relatively large number of secondary schools. Under these conditions the use of a satellite for distribution may be warranted. In any event, the mechanisms for sharing can be developed and evaluated even though distribution via satellite may not prove to be cost-effective. Initially, the ATS-6 can be used to transmit selected materials in the evening, a practice which should probably be followed when operational to ensure lowest commercial rates. The material is recorded by unattended recorders for use at the local instructor's discretion. Program material can be obtained from national tape libraries or regional laboratories by a group elected by the cooperating districts. The acceptability and performance of the program content and their ancillary materials should be continually monitored and discussed via periodic teleconferences based on local consumer and teacher reaction. Teleconferencing technique can be tested over the ATS-1, ATS-6, CTS, or a commercial satellite, if available.

Training of professionals either in specialized subjects, the learning of new techniques, or working toward credentials has a high probability of success based on the experiences in Alaska and West Virginia. It has been shown that a large number of professionals can interact effectively in a disciplined environment (University of West Virginia gave more than 25 courses in a single year to health professionals in 45 locations). The procedure which has proved successful is the same as that discussed under the telecommunication support for dispersed classrooms. In this instance, however, one meeting per week is probably sufficient to handle each subject and all students. Efficient handling of large classes helps to make this mode of operation one of the most cost-effective of all services. ATS-1, ATS-6, CTS, or the commercial health channel are suitable.

In-service training of native instructors can follow the route laid out above or in a team-teaching situation. In the latter, the staff is made up of Native instructors trained as specialists in different disciplines and under the supervision of a certified teacher. Individual instructors complement each other to cover the range of courses taught.

Continuing coursework via telecommunications upgrades the Native instructors toward full certification. This represents a method for getting many Native instructors qualified simultaneously while providing students diversity of coursework in a school setting.

From the outset, a conscious effort should be made to acquaint the village people with the nature of the educational system and its aims and to encourage their active participation. Village consumers should meet at scheduled times under the leadership of a trained village resident. The experience of radio forums in Niger, Dahomey, India, and others show that if there are dominant individuals (and there always are) their views will always be heard while many others are reluctant to voice their views. The moderator must be able to get their participation if the views of the village are to be representative. Experience in village Alaska (Alaska Native Magazine) also pointed up the need for such local moderators to interface with teachers. The moderators summarize the discussions, highlight key issues for immediate attention and forward the information to District Administration for action. The mails can be used. At the district level the reports from all village consumer groups are reviewed and key issues identified for resolution with higher authority. At scheduled times district and state administrators should hold conferences and discuss major issues, curriculum, and resolve differences. Consumer groups should be notified quickly of actions taken in response to issues they have raised. Again, voice bandwidth communication is sufficient.

With the rising desire for local control and the fact that local inputs to programming is limited in view of the lack of technical competence, resources, etc., an obvious dilemma exists. This issue must be resolved in any future ESCD experimentation and when dealing with local Native authorities. A possible solution lies in the notion of voucher education. This concept can be used to enable Natives to choose those programs considered appropriate or desirable for themselves and/or their children. Local authorities retain control of materials selection and pay for them from predetermined allocations, but the materials are professionally conceived, designed, and produced.

The voucher approach allows a good deal of flexibility in the choice of options. Local authorities could, depending entirely on their analysis of needs and investment payoffs, invest in locally produced programs. Satellite, local TV, videotapes, etc., can be considered for distribution during the continuing ESCD. The following alternative (not mutually exclusive) options seem promising at this time:

1. A local TV station can be subsidized for a portion or all of its equipment costs to extend its coverage to a village or villages not currently covered with the provision that those villagers are allocated a specified number of broadcast hours to be used by them for broadcasts of their own choosing. The constraints on those broadcasts should be that they meet the programmatic constraints of NIE (e.g., education) and are independently developed by the villagers. The villagers would be trained only to the extent required to have a performance knowledge of broadcast studios and equipment.

2. The villagers may select educational programs from a range of available alternatives. Early screening of alternatives must take place. The best option, or at least one that should be made available to local authorities, is packages of a series of programs predeveloped according to expressed local interest.

3. Individual villages may provide materials for the regional station for subsequent retransmission to the urban area and other cooperating villages (this is not interactive TV).

4. A number of villagers can cooperate in using their collective vouchers thus creating a network.

The voucher education experiment probably should be administered by the regional Alaskan Native organizations. However, there can be varying conditions. In some cases, the voucher should be to an entire village, in others, individually involved families, and in still others decisions should be made by the regional council.

Assistance provided should be solely in identifying the types of educational alternatives that might be purchased with the vouchers and in setting up an evaluation schedule such that the information generated is useful for decisions about alternatives.

It is probable that the voucher approach applied to villages or groups of families will have important community-building effects. This possibility should be carefully examined in the pre- and postevaluation.

In the remaining portion of this discussion, we will highlight two additional areas of original experimentation with the solution elements defined above. That is, we will identify (a) the general background and systematic work done to date with the concepts incorporating many or most of the elements recommended for experimentation, (b) consider the pertinent conditions in Alaska now and in the foreseeable future, and (c) propose a rough outline for experimentation. The two concepts we will draw on are (1) the telecommunicated "Foxfire" (a concept in educational use but heretofor never related to ESCD or any satellite-related research and (2) parent-child "coschooling" (which has never been tested systematically).

D. TELECOMMUNICATED "FOXFIRE"

Foxfire is traditionally an experimentally-oriented learning process which utilizes a child's own culture and community to enrich his curriculum, enhance his own self-identity, and transmit certain basic oral and written communication skills. He uses his community as the source of material for studies, gathering and processing that material into a finished product which can be shared with others.

1. Summary Status of Foxfire in Alaska

Based on information from State Operated School System regional staffs and representatives of the nonprofit Native organizations Yupiktak Bista, Manuelak, and Kawerak, Foxfire appears to have strong potential as a tool in developing individualized social studies and language arts curriculums for expanded secondary school programs in Native villages. Using available resources such as the Kaliikag Yugnek project at Bethel Regional High School and coordinating with existing cultural heritage and other programs, Foxfire is used as a strengthening factor to encourage

community participation in school activities, team teaching, and materials and skills development. Beginning with two or more villages in each region, a program is being developed over a two-year period involving a few of the expanded secondary schools in the region and serving as a model for rural schools in other parts of the state.

In the spring of 1974, the Alaska State Board of Education approved a contract to survey the feasibility of state-wide utilization of the concept. The survey was conducted in October and November, 1974 and the following summary recommendations made to the Board in its November meeting in Anchorage:

- In the area of voiced needs in education in Alaska, Foxfire appears to have particular applicability to community-school relationships; development of interdisciplinary and team teaching programs, life-involvement education, teacher training, and bilingual and bicultural education and materials development.

- The Alaska State Department of Education will fund core costs associated with state-wide extension of the Foxfire Learning Concept within public schools in Alaska. Covering these costs will probably enable individual boroughs and others to more easily initiate Foxfire programs by requiring those districts to cover only those costs associated with direct project implementation such as week-long on-site training workshops and instructional materials.

- Over a 2-3 year period beginning in calendar year 1975, 5-8 projects utilizing Foxfire in varying ways should be developed as models within the state. Examples include utilization of Foxfire in environmental education in heavily impacted areas such as Valdez, Fairbanks and the North Slope Borough; multiethnic, urban projects similar to that initiated in Western High School in Washington, D.C.; bilingual and bicultural curriculum and materials development (including documentation of traditional and modern skills as a component of vocational education courses requested by parents in the community) particularly in new secondary schools scheduled for opening by the State-Operated-School System in Native villages in the fall; in-service and preservice workshops for teachers in the educational approach (utilization of a child's culture and community to enliven the curriculum) underlying Foxfire; and career education.

- Efforts should be made to develop a variety of end projects, including quarterly magazines, from the individual Foxfire projects.

To date, Foxfire activities in Alaska include:

- Preliminary needs assessment; identification of project locations, teacher-advisors and student staffs; and program design (sequencing of projects, curriculum criteria, outline of general administrative and technical assistance framework for monitoring and coordination of the program, finalization of an operating budget, and recommendation for funding).

- In-service training for teachers in the process and methods underlying Foxfire. An example of this is the three-day workshop held last June at Appalachian State University, sponsored by the North Carolina State Department of Public Instruction, and involving 25 English teachers from around the state. The University of Alaska at Fairbanks has held a similar course in June 1975.

- Week-long skills-training workshops involving 25-35 students and teachers. Conducted on-site by a training team staff, teacher-advisors and peer teachers from operating Foxfire projects, the workshops center around technical skills (photography, darkroom, interviewing, transcribing, indexing, story writing, layout, office organization, and distribution of finished by-product) and identification of community resources.

- Instructional materials including a teacher's guide by Eliot Wigginton and an accompanying student-skills series.

2. Possible Experimentation

The "telecommunicated Foxfire" can be conceived, roughly, in the following way:

- A selected number of on-going Foxfire programs as well as new ones will be involved in a state-wide coordinated system, or alternatively, a few large-regional arrangements.

- In addition to other products the programs will be geared to the production of one or several telecommunicated live presentations. Such commitment will be required of participating schools. The presentations will be prepared with the view toward inducing interactions and discussions with other participating schools.

- The "telecommunicated Foxfire" may be available on a receive-only basis to schools not participating in the program (or to other groups in Alaska).

- A special effort will be undertaken to induce maximum participation of groups speaking the different traditional languages and dialects--and particularly major Native groups representing different ways of life.

- The acquisition of new skills: both life-skills and vocational trades can be used as one major topic in this programming. Efforts should be made to show harmonious coexistence and, in fact, relationship between different styles and approaches to making a living in the state.

- The program may be developed to incorporate aspects, topics, and curricula that proved successful across cultures and regions during the initial stage of the ATS-6 program.

- High school competition, debates, or other activities that can elicit major interest across the State of Alaska can be interwoven into the programming. Careful preplanning of viable competition will be a necessity with the option of tabling unfair or potentially overly frustrating projects (from the point-of-view of small schools with small student populations upon which to draw).

- The "telecommunicated Foxfire" can be--and should be--a source for exciting change and an opportunity for demonstrated performance across schools, and its program should be developed accordingly.

- A special commission may have to be established coordinating the State Department of Education, the local high schools, and the variety of institutions involved in the ATS-6 effort to plan the program.

- In its most advanced form the "telecommunicated Foxfire" can be expanded to be an excellent test-bed for application of the "Minerva" concept of participatory technology to high school networks. According to Amitai Etzioni (1972), "communications technology that is or will soon be available can help create better opportunities for mass discussions about public issues. The hardware and software prerequisites for such discussions are: capacity to address participants, facilities for real-time dialogue between geographically dispersed groups, continuous feedback between audience and broadcasters, techniques for recording responses and reporting group feelings, provisions for injecting expert

information into the dialogue, rules to regulate access, and provisions for subpopulations in intersubpopulation dialogue." Certain uses pertinent to Alaska and its unique make-up of population and problems may be advanced, of course. The system can also be used to tie Alaskan groups to other U.S. groups.

E. PARENT-CHILD COSCHOOLING

1. General Background

In the tremendous amount of research on the effect of communications that has emanated in recent years, the relationship between parent and children has surfaced as one of the most pivotal and least studied contexts. Studies on children, inspired by the Surgeon General Scientific Advisory Committee on television and social behavior (1973) showed clearly that there is a causal relation between the environmental contexts in which TV viewing is done and its learning effects on children. While the most publicized effects are those related to learning antisocial behavior, some data should be recalled also in relationship to socially valued behaviors, especially with regard to parents supporting children's learning. Evaluation, for example, of homes homes in which parents and children watch educational programs followed by a discussion of the programs, shows that children retain more and adhere more to later presocial behavior. Evidence for this type of positive influence exists primarily for viewers young enough to view programs such as Mr. Rogers, Sesame Street, etc., but also applies across ethnic groups (see Leifer, Gordon, and Grave, 1975: 237) and possibly across nations.

Parents who watch educational programs with their children and comment on the content can also influence what their children retain. This has been demonstrated in both the U.S. and Israel for mothers and children watching Sesame Street. The first year evaluation of Sesame Street in the U.S. indicated that children who had learned the most, watched more but also had mothers who watched with them and talked about the program's content (Ball & Bogatz, 1970). In Israel, children whose mothers were asked to view Sesame Street with them two hours a week gained more information from the programs than children with nonviewing mothers (Salomon, 1973). Also, when their mothers watched with them, children from a lower socioeconomic group gained more than children from a middle socioeconomic group.

It appears that much can be gained by linking young children's watching a good TV program with the availability of a parent. Both experience the medium/message and the parent then supplies guidance. Careful observers such as Gardner Quarton (1968) and others have long argued that "behavior is readily modified by supplying or withholding maps or models of how other individuals behave." This discussion may have implications for new experimentation in Alaska as well as elsewhere in three important redirections:

- Teenagers involved in a high school program, are as much in need of parent support for their learning as younger students.

- One of the best ways to relate learning more directly to life realities is by diminishing learner dependence on schools and teachers. The home is then an excellent environment.

- Given the relative maturity of high school learners, and the possibility of new curriculum development from which parents as well as children can learn, their colearning may be an excellent complement to the high school learning experience.

Such approach has, in fact, roots in what Charles A. Wedemeyer (1975:20) and other students of satellite education have been arguing for some time. Professor Wedemeyer says:

> I think that the conservation of resources and energy at this point in media development indicates that more progress will be made in non-school contexts than in schools. I am not denigrating or discouraging the work being done by dedicated people in school media programs. I just think that before we can do a really good job in schools, schooling must undergo a clarification of what teaching and learning as separate activities are; relate learning more directly to life realities; diminish learner dependence on schools and teachers; encourage learner responsibility, self reliance and independence; and evolve teacher roles that are satisfying, rewarding and compatible with a focus on learners and learning as well as subject matter.

2. Conditions in Alaska

The Alaskan experience of educating children away from home has been one of the most painful and educationally devastating in American education. The conclusions as offered by the Alaskan Natives themselves are clear: "village people want to be responsible for their children, and that responsibility must be returned to them....Local control is regarded as the exercise of basic parental and community rights and responsibilities.... [It] refers not only to policy decisions made at the local level, but also to the designing of the total education program by local people.... (Native Association 1972: 9).

Many Natives are clearly geared toward seeing modern education creating modern men of their children, but respect for home culture and environment are not items that they are willing to compromise: "If rural schools are truly an integral part of the community, they will generally reflect two or more cultures: that of Western man and his urban technology and that of the Alaska Native and his way of life. The ultimate outcome is children who are able to cope with the two cultures." (Native Association 1972: 6).

The significance of systematic research, such as produced by Judith Kleinfeld (1970-1973) demonstrates the futility of Boarding Home and Dormitory Programs in Alaskan towns which have high levels of social problems. Such studies clearly show that for these types of schools as well as the public boarding schools that "students have little meaningful contact with adults who could provide guidance, and they are influenced primarily by equally confused or misdirected peers." In her study of the 1971-1972 classes of village students who entered high school programs (of the three types mentioned here), psychological and dollar costs have been determined as very high for most educational alternatives except high school programs that are established in home villages. Proximity to "home" appeared as a paramount factor. Alaska, thus, offers a very important possibility to test the effectiveness of new educational concepts.

3. Possible Experimentation

Parent-child coschools using telecommunications can be conceived, roughly, in the following ways:

- A selected number of homes in which both parent and high schoolers are willing to commit themselves to coschooling for the duration of the program will be involved in a state-wide coordinated system. These homes will be located in villages in which small high schools have been established.
- In some cases arrangements will be worked out between parent-child teams so that coschooling can be expanded to encompass several such teams.
- A control authority will have to be established for both program development and coordination and inspection of parent-child coschooling.
- Most homes participating in the coschooling program can be connected to receive-only terminals with or without adjustment for phone connections. Intensive terminals may be superfluous.
- A principal problem asserted in previous ATS-6 demonstration projects and Alaska school management alike is local control. Clearly, village and generally Native control is greatly desired by all Alaskans. It should be recognized also that the newly forming district boards of education and other local authorities (at the village level) can be enhanced by creative home involvement. Thus parents involved in the parent-child coschooling are logical condidates for local control and the interpretation of a state-wide project to the local community. Thus, "parent-child" coschooling may be integrally related to the concept of voucher education discussed above. It may possibly be one of its most promising bases.

F. CONCLUSION

In summary, a number of basic experimental models have been defined, all contributing to a common purpose--a cost-effective and efficiently operating small secondary school system. Key to these models has been the fact that they attempt to take advantage of the experiences gained throughout the world with similar situations. Further, they should be

considered only initial models, to be modified, discarded, or adopted as evaluation dictates. The affected populations should be allowed the freedom to innovate and not be hemmed-in by rules and regulations imposed by NIE or the State of Alaska (this situation did not obtain in the original ESCD). The models primarily use voice bandwidth communications, thus making it simple to adopt the attractive aspects for commercial operation at the earliest convenience. Materials distribution is the only mode which uses the broad bandwidth (video). Although this cannot be phased into an operational mode as quickly as the others, the RCA satellite plus a relatively inexpensive modification to the satellite earth stations presently being installed in "bush" Alaska will receive quality video. This aspect of village communications is presently being negotiated by RCA and the State of Alaska.

SECTION FOUR

LOCAL CONTROL: IMPLEMENTATION & IMPLICATIONS

A. INTRODUCTION

One of the major oucomes sought from the ESCD/Alaska was to establish Consumer Committees as a means for giving control to the villages of processes by which cultural values are presented in the instructional media.

Volume I presents 13 recommendations, seven of which deal with questions of how to provide relevant programming. Most of these recommendations do not deal with the Consumer Committees per se. An analysis to determine which recommendations were actionable and which were not showed that all but six could be implemented immediately. Of the six, five were in the category of how to provide relevant programming:

- Recommendation 5 (p.III-106): As a complement to satellite telecommunication systems, regional media networks must be developed to meet the demands for region-specific programming.
- Recommendation 6, sub 3 (p.III-108): As soon as there is satellite telephone in rural Alaska, audio interaction should be used without video programming--for administration and management of media services and educational materials distribution.
- Recommendation 7 (p.III-109): To give Alaskan Natives direct participation in programming, the appropriate investments are in regional and local media networks and programming.
- Recommendation 8 (p.III-110): ESCD Consumer Committees (including Utilization Aides) should be given funds for buying programming on behalf of rural Alaskan villages. Awards of programming resources should be made on the basis of samples submitted by potential programmers in competitive bid fashion. Teachers should participate as advisors in children's programming. The Consumer Committee must be allowed to use the money to either buy already existing programming or to contract for new programming.

TABLE IV-1

RECOMMENDATION 5: (p III-106) As a complement to satellite telecommunication systems, regional media networks must be developed to meet the demand for region-specific programming.

DATA REQUIRED TO DEFINE ACTIONABLE APPROACH	DATA AVAILABLE	DATA STILL REQUIRED	WHERE TO OBTAIN DATA
1.What will be the "social impact" of TV? ° Commercial; ° Educational; ° Consumer-responsive.	1.PCI report for NIE; 2.Mini-TV & Project Wales studies; 3.PCI telecommunications evaluation for AID & its bibliography; 4.National surveys; 5.International studies.	1.Answers to specific questions (yet to be formulated); 2.Input from sociologists; 3.Reduction of data from other studies of TV impact on isolated populations.	1.Targeted questionnaires for residents, Native Corporations, etc.; 2.Prof. Kraus, others; 3.Reports, computer analysis.
2.What situational variables define a "region?"	1.Indian Health Service partitioning rationale; 2.School system rationale; 3.Native Corporations; 4.State subdivision rationale.	Importance of: 1.Social factors; Heritage; Languages; other; 2.Geographic factors; 3.Political factors; 4.Market factors.	1.Interviews; 2.Surveys; 3.Reports.
3.What subject matter should constitute the main thrust of regional TV?	1.NWREL; 2.Programming of present regional broadcasters (BETHEL); 3.Consumer Committees; 4.Wales Project, Mini-TV Project; 5.Alaska Native Magazine.	1.Information on present spending habits; 2.Programming used at present & acceptance; 3.Desires of village people.	1.Interviews with villagers; 2.School records; 3.Sociologists (like Kraus).
4.Should regional networks be privately funded, sponsored by Native Corporations, other? ° Should PBS Broadcasting be used? ° Should it be competitive w/ commercial TV & PBS? ° Should it be totally responsive to user desires? What form should this "consumerism" take?	1.PCI report to NIE; 2.PBS studies; 3.Private regional network performance (financial); 4.Filings of regional networks; 5.Rural radio forums.	1.Findings of question 3; 2.Reaction of villagers to PBS broadcasting(?); 3.Villagers preference of regional TV (present) to commercial broadcasts in <u>other</u> than commercial programming; 4.Incentives to private investment; 5.Incentive for Native Corporations; 6.Options available for consumer input; 7.How has consumerism worked elsewhere?	1.Interviews at all levels in State; 2.Survey of efforts in other areas; 3.Economic analyses by region of potential & modified by findings of Project Wales, others.
5.What will be the impact of July '76 regionalization of the Alaskan State Operated Schools.	1.Directive itself; 2.Alaska Government plans; 3.Regional plans; 4.Present operating plan in State.	1.Real changes implied in directive; 2.Who has the action; 3.Steps being taken to implement change; 4.Political situation & impact; 5.Consumer understanding of change & their participation.	1.Interviews on State "Hill;" 2.Interviews at Native Corporations; 3.Interviews at village level; 4.Analysis of plans submitted by responsible organizations; 5.Budget available for changeover (analysis of its potential for change).

TABLE IV-2

RECOMMENDATION 6, Subparagraph 3: As soon as there is satellite telephone in rural Alaska, audio interaction should be used without video programming: Administration & management of media services & educational materials distribution.
(p III-108)

CLARIFICATIONS:
- This must be considered as operating on a local level to be consistent with the rest of the recommendation;
- "Administration & management of media services" must (?) imply the selection & purchasing of materials for the district;
- "Educational materials distribution" implies (?) the physical choice of distribution mode, e.g., dubbing & mailing to schools, bicycling a tape between schools, other? I interpret it thus, because there is no satellite distribution media assumed by this recommendation.

DATA REQUIRED TO DEFINE ACTIONABLE APPROACH	DATA AVAILABLE	DATA STILL REQUIRED	WHERE TO OBTAIN DATA
1.What group constitutes this body? ° Village representatives; ° Native Corporations; ° Teachers; ° Representatives of school district; ° Mix.	1.None	1.Desires of those involved & effected; 2.Info from other areas which have done this; 3.Are there legal obstacles?	1.Interviews at all levels; 2.Literature survey; 3.Legislation/charter of new regionalized SOSS.
2.How are they selected? ° Elected; ° Rep chosen from each village; ° Selected by School Admin.	1.None	1.Desires of those involved & effected; 2.Other experiences.	1.Interviews; 2.Literature survey.
3.To whom are they responsible? ° Villages; ° School administration.	1.None	1.Desires of those involved & effected; 2.Other experiences.	1.Interviews; 2.Literature survey.
4.What would be their legal status relative to the school admin? ° None; ° Coordinative only; ° Part of the organization.	1.Present procedures governing materials acquisition; 2.Regionalization of SOSS directive.	1.Legal status of such an agent; 2.Desires of those involved & effected; 3.Other experiences.	1.State & school documents/charter; 2.Interviews; 3.Literature survey.
5.What should be their functions & responsibilities?	1.From PCI report to NIE; 2.Present procedures.	1.Desires of those involved & effected; 2.other experiences.	1.Interviews; 2.Literature survey.
6.How do they get funding for staff, purchasing materials? ° State; ° Taxes; ° School administration; ° Federal (?)	1.Present procedures; 2.Regionalization of SOSS directive.	1.Funding sources potentially available; 2.Desires of thos involved & effected; 3.Other experiences.	1.Legislation, school charter, etc.; 2.Interviews; 3.Literature survey.
7.What should be relationship w/ regional programming organizations (if established)? ° Treat them as another competitive source; ° Subsidize region-specific programs.	1.PCI report to NIE on desire for region-specific programming.	1.Are there legal obstacles? 2.Desire of those involved & effected; 3.Other experiences.	1.Laws, charters, legislation pending; 2.Interviews; 3.Literature survey.

TABLE IV-3

RECOMMENDATION 7: To give Alaskan natives direct participation in programming, the appropriate investments are in regional & local media networks & programming.
(p III-109)

DISCUSSION:
- This recommendation overlaps in large measure recommendation 5.
- If cost-effectiveness is the name of the game, why should Roger fear the advent of satellite TV before regional networks can be established? If the satellite satisfies the need, then why regional networks?

DATA REQUIRED TO DEFINE ACTIONABLE APPROACH	DATA AVAILABLE	DATA STILL REQUIRED	WHERE TO OBTAIN DATA
1.Question 2 of recommendation 5 2.Question 3 of recommendation 5 3.Question 4 of recommendation 5 4.Question 5 of recommendation 5 5.Question 7 of recommendation 6, sub 3			
6.Who will pay to train locals in the media arts? ° Private organizations; ° Native Corporations; ° Federal Government.	1.None	1.Does the demand warrant this investment; 2.Can this training be covered by Federal grants; 3.Can the state support training & would it; 4.Are Native Corporations authorized or would they support training.	1.Interviews; 2.Document search: State, Federal, Native Corporations authorization.
7.Can regional networks survive satellite TV.	1.None	1.What kind of TV is contemplated for delivery via satellite; 2.How realistic & in what time frame; 3.Is subsidization the only way; 4.Is subsidization legal.	1.Networks, carriers; 2.Plans of Alaska; 3.RCA Globecom/Alascom; 4.FCC.

TABLE IV-4

RECOMMENDATION 8: ESCD Consumer Committees (including Utilization Aides) should be given funds for buying programming on behalf of rural Alaskan villages. Awards of programming resources should be made on the basis of samples submitted by potential programmers in competitive bid fashion. Teachers should participate as advisors in children's programming. The Consumer Committee must be allowed to use the money to either buy already existing programming, or to contract for new programming.

DISCUSSION:
- There appears to be overlap or contradiction with recommendation 6 sub 3. If they are separate it is difficult to see where responsibilities of one ends & the other begins;
- If this & the group in Recommendation 6 sub 3 are different but both native & from the same population group, it sounds like a great set-up for collusion.

DATA REQUIRED TO DEFINE ACTIONABLE APPROACH	DATA AVAILABLE	DATA STILL REQUIRED	WHERE TO OBTAIN DATA
1.Question 4 of recommendation 6 sub 3 2.Question 6 of recommendation 6 sub 3 3.Question 7 of recommendation 6 sub 3			
4.What should their charter include: ° Educational programs for school; ° Non-formal education; ° Special programming of regional interest; ° Mix.	1.PCI report to NIE; 2.Regionalized SOSS directive; 3.Present rules governing materials acquisition.	1.Legal aspects; 2.School administration viewpoint; 3.Public opinion; 4.Has it worked elsewhere.	1.State & school legislation, charter, etc.; 2.Interviews; 3.Document survey.
5.Special training required to make valid judgments on materials.	1.None	1.How to provide guidance as to the quality of materials; 2.Who pays for training or consultants.	1.Interviews; 2.Survey of other similar projects elsewhere; 3.School, state, national responsibilities.
6.Is this practical at the village or only on a regional basis.	1.None	1.Economies of scale to be a consideration? 2.High schools are regional-how do the Consumer Groups interface; 3.Public, school desires.	1.Survey of other experiences; 2.Economic analysis; 3.Interviews.

2. Implications for resources devoted to new programming.

- Is it practical to think in terms of individual villages creating a need for new programming? Perhaps only "region" size entities are viable.
- If cost effectiveness is important, then perhaps similar portions of the curricula should be reviewed to determine common program material needs. How should this be done?
- Depending on who holds the purse strings, what procedures and decision criteria are necessary to authorize generation of new materials.
- It would appear that involvement of the school administrations is necessary in the matter of "local control."

RECOMMENDATION:

A key issue addressed in the coming year should be "Local Control: Its Implementation and Implications."

SECTION FIVE

QUESTIONS & ANSWERS FOR KEY AUDIENCES

Evaluation is undertaken to help people make decisions. In that spirit, this section of our report "pushes" the data to develop operational answers to questions being faced. Although some of the questions appear duplications of what appears elsewhere, they are included for completeness. We assume three audiences:

A. Federal Administrators.
B. Alaskans.
C. The Internationally Minded.

A. QUESTIONS & ANSWERS FOR FEDERAL ADMINISTRATORS (e.g., NIE)

Q. Should NIE make further investment in educational demonstrations in Alaska using the ATS-6?

A. No--not if the use of ATS-6 is the driving function for demonstration design. Neither the research value nor the educational effects to be expected from such action would justify further investment, and alternative uses of the ATS-6 should be sought. Analysis of the ESCD (Volume I) and the findings of this supplement show that the usefulness of the high power and wide bandwidth of ATS-6 lies in its potential for cost-effective materials distribution, all other functions can be accommodated by voice bandwidth. Recognizing this factor opens the door to the use of several attractive alternatives--

CTS, commercial satellite and, in some instances, ground-based networks. Several of these are prototypical of operational modes that can quickly be put to use should the experiments prove successful. If ATS-6 is used it should be in a mode that can be duplicated commercially in the near future.

2. Q. Should NIE invest in educational television projects where, as was done in ESCD, programs are broadcast from a central organization over extensive areas of the state.

A. No--not if distribution is the major purpose of the experiment and not supportive of a perceived educational need. The experimental value is not justifiable. Further, caution must be exercised, under all circumstances, when programs are aimed at preserving cultural diversity. Culturally relevant programs produced by a central organization for a wide area and which address many cultures are necessarily stereotyped. ATS-6 programs tended to conceive of "Alaskan Natives" as being essentially homogeneous, and sanitized (obviously a broadcaster in Juneau has a tough time talking about the possibility of a cultural predisposition to alcoholism). Thus, these programs project a pseudoculture that is essentially an "Anglo-caricature" of what Alaskan cultural diversity is all about. (One pundit has suggested that if we keep up this trend of culturally rich programming, we may finally have the Alaskans believing that they live in igloos.)

3. Q. Given that the ESCD has to some extent created a constituency in Alaska and that NIE will fund additional demonstrations or experiments in Alaska, what are rational rules to follow in making such an investment?

A. ° Give control over programming and broadcasting to the Alaskan Native. A good vehicle for such activities might be the regional Native associations.

° Restrict expenditures of the money only by tying it to the achievement of educational objectives. Recommend but do not insist on investment in secondary level education.

° Allow the Alaskans to purchase help in making decisions but not in actually carrying out those decisions. Allow them to buy existing programs and contract with various program developers chosen for them, but do not presume to be avoiding their "making mistakes."

° Above all, do not subsidize adaptations to the communications technology by allowing the creation of so-called "professional" groups standing between the communications medium and the educator. By all means, do encourage active involvement and experimentation with the technology on the part of educators and audiences alike.

° Require that at least some portion of the educational programming investment and hours involve <u>programs planned and developed by and for Alaskan villagers</u>.

° By all means encourage development and/or purchase of taped materials as opposed to requiring real-time TV.

° By all means encourage the Alaskans having access to editing benches and other dimensions of the technology, and encourage them to use such devices.

° Encourage them to gain instruction in how such devices work. But discourage and refuse to pay for, instruction that focuses

on how to turn out a standard studio product. The objective here is to encourage direct experimentation, not to teach Alaskans how to turn out more of the same high-cost, low-value product that such demonstrations frequently involve.

- Adapt the ESCD receivers so they can pick up non-ATS-6 programs, for example, from CTS.

- Loan villagers some cameras and tape recording and editing equipment, and ask them to develop some useful programs for (a) primary school education, (b) secondary school education, (c) characterizing and stengthening their culture and traditions--explaining it to both outsiders and their own children.

- Don't give money to universities to develop educational program packages. In fact, if you have decided to give the villagers money and some discretion over it, you should allow them to purchase only preexisting or speculatively developed instructional packages from universities.

- Inventory existing taped video programs that might be of value to the Alaskan villagers and let the village committees screen those tapes--auditioning them for possible purchase or use.

- Identify organizations--contractors, universities, etc.--who would be interested in developing programs addressing the secondary school needs of Alaska. Have them make real or tape video presentations over such communication mechanisms as are available to the Alaskan villagers. Based on these assessments allow the villagers to ascertain whether there were conditions under which the villagers would be willing to purchase their services for program development.

- Ask the Alaskan villagers what to do and in a setting that deliberately excludes the various other vested interests including universities, state officials, Federal officials, etc. The Alaskan Natives will almost undoubtedly be too polite to disagree with the experts. They will certainly be too polite to be critical of prior activities in the presence of strangers or the establishment that was responsible for those prior activities.

4. Q. How should NIE invest in satellite demonstrations?

   A. Only in ways that are consistent with the requirements for NIE investment in demonstrations generally.

5. Q. How should NIE invest in technology demonstrations as a general rule?

   A. Provide or subsidize the technology but do not subsidize use of the technology. If you are going to run an ESCD, run it without giving anybody grants to develop programs. (With the possible exception of giving money to the villagers to develop their own programs.) NIE's product is knowledge. Knowledge about education and how to educate. Knowledge about how people learn and how to teach them. That knowledge will come only from independent experimentation--attempts at innovation. As soon as we subsidize people--bearing the marginal cost of their adapting and using the technology--we preclude true innovation. True innovation means that we change the way we do things in a manner that takes advantage of both the technology and the best of the ways things used to be done.

B. QUESTIONS & ANSWERS FOR ALASKANS

Questions of interest to Alaskans are addressed in this section of the report, both in question-and-answer format and by presenting a table of recommendations regarding Alaskan media requirements.

1. Q. How should that investment be made and controlled?

   A. Local autonomy--control over planning and investment by village or regional Native nongovernment organizations.

2. Q. Is the satellite necessary for educational programming in Alaska?

   A. The satellite is but one (of several) alternative ways of providing wide area telecommunications coverage from a single source. The question of whether or not satellites are the best way of providing this coverage is a technical judgment that will eventually be answered in the marketplace.

   Further, although we originally predicted there would be some Hawthorne effect associated with the glamour attached to the satellite, our data do not show any such effect to be of importance. By and large, the Alaskan villagers are objective about the satellite-linked communications. They perceive it as more reliable than alternatives and desirable for that reason.

3. Q. Should NIE fund further educational demonstrations in Alaska using the ATS-6?

   A. Not necessarily on ATS-6. If the charter of NIE is to encourage educational experimentation, then there are alternative ways of

doing it. Village level and even regional council involvement in ATS-6 programming and actually shaping programs was small. And although the Alaska site did establish some programming that was different in kind than predecessor programs (e.g., the Alaska Native Magazine), the experimental value of that program is modest. Further, care must be taken to ensure that direct government sponsorship of such demonstrations does not preclude the practical innovations and experimentation at which such investment is presumably aimed.

If NIE funds further educational demonstrations, Alaska is the place to do it, and the recommendations of Table III-1, Volume I should be followed. Satellite-linked communications will inevitably become the way of life in Alaska, and there is strong felt need for educational programming to complement secondary school activities. Therefore, the focus of such investment should be on:

- Secondary school education.
- Tape as well as real-time video.
- Village level or regional control over all plans and investment.

4. Q. What is the demand for television in rural Alaska?

A. Very high. High enough in fact that it is probable that even educational programming would be extensively used. However, placement of the TV set in such a centralized location (e.g., the school) will reduce viewing hours.

5. Q. What is the predicted effect of extensive TV on rural Alaska?

A. Our evidence is not conclusive. However, there appears to be a danger and the concerns have been sufficiently expressed to us by some Alaskans at the village levels, that our operating hypothesis

must be: Unless actions are taken to ensure otherwise, the effect of TV on rural Alaska can be negative. That is, it can be detrimental to village culture, absorb potentially productive hours as viewing hours, and provide modest benefits in terms of skill or knowledge acquisition.

Since some form of TV is inevitable for Alaska, this negative possibility is important. The best strategy for counter-balancing the negative factors appears to be truly decentralizing some of the program development activities. Creating a climate in which local broadcasters and regional and village level organizations and individuals become directly and actively involved in experimentation with the media.

6. Q. What is the reaction to the temporariness of the satellite television demonstration?

A. The temporariness of ESCD reinforces the Alaskan villager's perceptions that the government is insensitive to the real needs of rural Alaska.

Further, such "temporary" activities may delay the development of alternative communication and programming. Even though the demonstrations are not permanent, they may be sufficient to prevent local broadcasters from extending their coverage to villages that could be within their zone of coverage.

7. Q. If you do have a centralized broadcast capability, where should the television sets be placed?

A. Let the villagers decide. If that's impractical, then place them in the community centers, but make the villagers pay some portion of the cost thus creating an incentive to avoid vandalism. For the

school children, placement of the TV sets in the village center will subtly enhance the perceived relationship between village life and culture and the educational system. For adults, this should dramatically increase viewing hours because it will eliminate their embarrassment at being placed in a grade-school situation.

8. Q. Is real-time viewing and interaction to be preferred to distribution of videotapes?

A. Generally, for educational purposes, no. As a rule one would be better off in investing in improved programming rather than the technology required to support interaction. However, real-time video can enhance the entertainment value of programming.

Certainly satellite TV cannot be justified on the basis of real-time educational interaction.

And remember that one-way TV supplemented by a phone call becomes audio-interactive programming.

9. Q. Should television networks be statewide or further decentralized (e.g., regional)?

A. Over time Alaska will probably inevitably have access to state (and existing national network) television. Therefore, the question boils down to, in what direction should government investments be aimed? The answer to that question is toward regional programming and broadcasting. Alaska and the nation as a whole would be far better served if regional broadcasting and programming capabilities preexist the ultimate Alaska-wide participation in television.

10. Q. How can control of Alaskan media be delivered to the villagers?

A. Give the villagers real control over the media and its programming. Let them experiment and make their own mistakes.

Do not be deluded into thinking that participation of Native villagers in advisory boards and Consumer Committees represents village control. In such situations, the villagers will inevitably be coopted and end up doing whatever the "experts" think ought to be done. Villagers themselves should plan, program, produce, and broadcast programs they deem of local interest. They should be free to purchase existing programs but at least some of the broadcast hours must be of productions that are truly of Native development.

From the point of view of experimental education, it might even be desirable to allow Native organizations to be free to invest in alternatives other than TV-intermediated education (e.g., visiting instructors, films, and slide shows). The current pattern of letting the State House or Washington make such vital decisions as what programs shall be broadcast to the villages inhibits village involvement in the educational process. It may also color and perhaps inhibit villager's willingness and ability to involve themselves in other community or governmental activity. Currently the Alaskans perceive passivity in the face of government assistance to be preferred to active interaction. It should be an explicit objective to create rewards for active involvement and self-determination on the part of the villagers.

C. QUESTIONS & ANSWERS FOR INTERNATIONAL AUDIENCES

After the ATS-6 had been in operation a year over Appalachia, the Rocky Mountains, and Alaska, it was moved so that its footprint covered most of India. The ATS-6 is already a satellite with international applications.

Satellite telecommunications investments may be a technology "leap-frog" that can accelerate development for nations that have modest investments in telecommunications infrastructure.

Because of the high degree of interest by international audiences in satellite communications, and specifically in having ATS-6 operations undertaken over portions of the developing world, we offer the following:

1. Q. Should the ATS-6 be dedicated to third world applications or be returned to serve the United States (including Alaska)?

   A. If third world countries desire to perform experiments using the ATS-6, it should be dedicated to their use. There are situations where LDC experimentation may be of great value in proving out use of the technology before making major investments in operational systems. Further, there is the possibility that a consortium of LDC users can be established to purchase an operational satellite system or channels, dedicating those channels to social services. Experimentation prior to such major investments would be desirable as a mechanism for reexamining these possibilities, testing their cost and value, and if successful, providing momentum to such efforts. (The primary obstacles to multicountry satellites are political and bureaucratic, not technical.)

   Thus, it is PCI's perception that, under the right circumstances, there would be considerable value in dedicating the ATS-6 to LDC experimentation. It is also our perception that the ATS-6 has marginal value for application in Alaska and in the lower 48. Thus, on both accounts it makes sense for the ATS-6 to be dedicated to LDC experimentation and social service delivery.

2. Q. With what types of social service programming should LDCs experiment?

A. This, of course, depends on a number of variables and will vary from country to country and situation to situation. However, as a general rule, the greatest potential value for telecommunications and social services seems to be in health and only in a restricted sense for education. The most cost-effective modes of delivery use interactive audio--i.e., a doctor at a medical center consults with paramedical personnel at remote locations via two-way radio or for in-service training of remote professionals (paramedics, teachers, instructors).

Video can be valuable for program materials distribution under certain circumstances as mentioned earlier. It would seem that with many developing nations the lack of telecommunication infrastructure raises the probability that this mode would be cost-effective and worth doing.

Video can be valuable in allowing doctors to view patients. That is, one-way video from the remote locations to the center of expertise. Justification on the basis of patient service would have to be made on a country-by-country basis. The possibility of increasing productivity by reducing length of illness or the cripling effects of disease would be some of the major criteria for judgment. It is also possible for the MD at the central location to transmit to remote locations. This has great potential for in-service training and continuing education while helping to reinforce the role and authority of the paramedical.

Such training techniques can be used for teacher in-service and continuing education and may be the means for "certifying" local native instructors while they are teaching, thus having their services long before they are certified teachers and without having them leave the communities.

The combination of medical uses and the set of educational uses could possibly justify the ATS-6 type of technology which is not generally cost-effective in the developed industrial nations.

There is another form of medical education programming that limited evidence suggests might have high value, especially if coupled with other medical services: Consumer education in medicine--practicing preventive medicine by direct video link from a medical center to rural population. Both PCI's experience in Alaska and other medical TV networks such as INTERACT (the New Hampshire/Vermont Interactive Medical Television Network), suggests that M.D. broadcasts to the medical client in the rural health service center or hospital can be of enormous educative value.

Some key questions of interest to the developing countries considering investment in satellite communications are the following:

1. Q. Should LDCs invest in satellites as a way of providing basic communications infrastructure--is the communications satellite one of those technological leapfrogs that can bypass painful phases of development?

A. The answer to this question strongly and obviously depends on the situation in the individual country. However, the basic profile suggesting that satellite communications can be a preferred mechanism is as follows:

- No large existing investment in conventional land-linked telecommunications, thus no vested interests fighting for survival.

- Conventional communications, because of terrain, atmospheric conditions, and/or distances involved, are difficult to effect. (Although answering this question really requires at least a modest engineering study, the first-cut planning can be accomplished by using the approximation of travel time.)

- It can be assumed that the longer it takes to get from urban areas to remote rural areas, the more complex the communication problem and the more probable satellites can provide an important saving in costs and improvement in operations.*

2. Q. If nationwide or wide area communication is viewed as an important development objective, should LDCs experiment with satellite communications--that is, should they establish demonstrations, perhaps similar to the ESCD, to test out the value of program and telecommunications alternatives?

A. We have no data to suggest that experimentation is necessary for operational telecommunications--that is, to support normal commercial (telephone and telegraph) traffic. However, our data do suggest that there is a potentially high payoff in initiating experiments to test ways of providing social services via telecommunications. However, before committing resources to such a program consider the following points:

- There should be a reasonable prospect if the experiment proves successful, of moving to operations--providing on a regular basis the service that was once experimentally offered.
- That target sites and populations, program alternatives, etc. are established and controlled in a fashion to provide a basis for unambigiously evaluating the success or failure of the experiments.

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* Extensive time of travel is usually caused by the same factors that complicate line of sight (land base) communications: Long distances, mountainous terrain, weather conditions, and other atmospheric and ionospheric difficulties. Thus, for the State of Alaska, which involves long distances, difficult weather conditions, and an extremely low investment in conventional line-of-sight communication, it is virtually inevitable that operational communications will be provided by satellite. Indonesia, the Philippines, Saudi Arabia, Iran, Zaire, Sudan, Algeria, Brazil, and Peru are only a few of the nations that could potentially benefit from satellite communications because of their large land area and/or rugged terrain.

° Consider carefully the necessity for satellite telecommunications for such experimentation. Satellite-intermediated telecommunications differs from the conventional in that transmission costs are independent of distance. Therefore, if you do not need to cover relatively large distances (where per our previous discussion travel time is also a proxy for distance), satellite utilization is not necessarily cost-effective. On the other hand, if a single experimental satellite is shared by a number of countries, the cost per channel to any single country might well be below that of conventional microwave.

3. Q. Consider what will be done with the ground station after the demonstration--can they be made compatible with operational telecommunications alternatives?

A. There is ample evidence that such is indeed the case: (1) the Point Reyes, California demonstration which used commercially available electronics with the ATS-6 earth stations to communicate over the operational Canadian domestic satellite (ANIK) and (2) The State of Alaska and RCA Alascom are installing 10'-15' earth stations to provide village comunication over the soon-to-be-launched RCA domestic satellite. Therefore, since MDs and other highly trained health and education professionals concentrate in major cities, e.g., capital cities, there is a resultant scarcity in rural, isolated, and even remote urban areas. Taking advantage of nationally scarce professional resources to provide services to the underserved areas is an important incentive for telecommunication experimentation in the developing world.*

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* There is excellent evidence to warrant moving to operational health service programs using moderately trained paramedical personnel linked to the urban MD via interactive audio. The practicality of this has been proven in sites such as Alaska (ATS-1) and our analysis and first hand experience strongly suggests the practicality of this approach. Albert Feiner, presently of PCI, had responsibility for the Alaska Medical Network (ATS-1) and was involved in the Point Reyes experiment.

APPENDIX 1: CHRONOLOGICAL HISTORIES SUPPORTING FINDINGS OF SECTION II

ATTACHMENT #1

ical History: ESCD contributed to Alaska's ability to stand up to RCA Alascom/Globecom and negotiate for e commercial telecommunications system for the state.

3, 1972 [C76]

(U) letter to Arnold (AEBC) suggests three nc ns of Alaska and Hawaii: Reduction of a telegraph rates, possible joint use dio service on ATS-F, and real time dis- of at least the timely PBS programs. Sug- s ond and third concerns "...may well be si ring as we plan on our particular uses TS-F, or perhaps more importantly as we some future operational system..."; con- at e expects to be hearing about HEW con- an day and then will be able to contribute he planning.

1972 [C81]

bus Health, Welfare and Education e h ring on satellite telecommunications by Rep Chance. Arnold (AEBC) says of ..it is likely that we will have no en or 22 ground stations, and possibly No rip testifies that "It won't do the ch good to tool up for the ATS-F and G nts if the following domestic systems ov e adequate signals to the small s at will be utilized during these ex- al periods."

) 1973 [C157]

CE note to Northrip (OT) attaching vie s of OT's ATS-F proposal. March 12 finds it "one well-worth doing and re- ly onest in its admission that probably wi be proven other than Alaska's ability , nage and maintain a communications f unprecedented size or scope." Suggests ded on "what's next?"; that periodic nd eports should be built in to minimize ; ailability of skilled personnel; and s translations, viewer definition, and ealistic. Sees benefits in providing AK perience to help design and operate it based communications system for all s rather than strictly in educational March 27 reviewer discusses problems with fo the timetable; village play-back ty equipment tests; external evaluation; s mary, I think this is an excellent "

August, 1973

Alaska GOT receives contract from HEW/OT to install, checkout and maintain ATS-6 earth stations.

September 20, 1974 [C408]

Dr. Wernher von Braun (Fairchild) at a banquet speech in Anchorage describes possible sale of ATS-6 backup satellite for solving Alaska communications problems.

September 24, 1974

Anchorage Daily News--Doyon Regional Corporation Executive Director Sam Kito said after RCA plan for telecommunication submitted, "This appears to be a plan for terrestrial communications with a smattering of satellite technology. For quite a bit less than $100 million they could put up a sophisticated satellite that would allow very simple ground receiver facilities."

October 3, 1974 [C423]

Wiley (Aide to Gov. Egan) releases Sept. 20 letter to the FCC in which the Governor rejected RCA plan and encouraged FCC "to invite all other qualified domestic satellite carriers to offer proposals." (Anchorage Daily News article of Oct. 4 quotes the letter as expressing hope that "RCA was designing a system which optimized the full potentials of serving the conterminous United States as well as Alaska. In my letter of April 13, 1974, I urged RCA to proceed with what appeared to be such a system." Associated Press article of Oct. 5 points out that RCA's plan calls for 40 15-ft. satellite dishes supplemented by 30 32-ft. dishes costing $1-1.5 million; that the State has installed 15 portable 10-ft. dishes for ATS-6 that cost less than $30,000.)

October 8, 1974 [C427]

Buck (OT) memo to Gov. Egan analyzing cost and service of Fairchild's offer to modify ATS-F prime (back-up satellite) for Alaska. "Perhaps the most important message in the Fairchild proposal is that the technology exists to provide voice and video into small, low-cost earth stations. RCA could include this capability in their satellites if they

were so inclined." Concludes that ground system for ATS-F prime would have very attractive costs, but possible $60-70 million for satellite and launch is more than the State could handle without the offset of costs from commercial revenue.

October, 1974

Fairbanks News Miner--"The state, however, already installed 19 portable dishes measuring 10 feet in diameter to receive signals from NASA's experimental ATS-6 satellite."

October, 1974

Anchorage Daily News (Editorial)--"The natural tendancy for a private company is to view its products on a profit motive basis. In this case the priority is where the customers are--in the cities. Unfortunately, the real need is in the villages, where communications mean a link to deal with emergencies, education and health care."

October 11, 1974 [C431]

Thirteen US Senators sign letter to Pres. Ford asking him to reconsider termination of the ATS program and fund follow-on satellite to ATS-6. "The satellite has performed extremely well" the letter continues, and "after such a promising start, we should not interrupt a service which will provide health and educational benefits to students, teachers, and the sick." (Stevens [R-AK] was one of the signers.)

October 21, 1974 [C437]

Gov. Egan letter to Hinchman (FCC) confirms preliminary conclusions of Sept. 20. "The RCA plan falls short of meeting the requirements of the State of Alaska for low-cost telephone and television service to remote communities." Urges 5 FCC actions including request that RCA-Alascom submit a revised plan.

December 12, 1974 [C498]

Gov. Hammond letter to Sec. of Defense Schlesinger says the State of Alaska can never afford the cost of a Titan III c booster rocket to launch an "ATS-7" but there is an ample military inventory and the funding would not be necessary until FY 77. Outlines military services which could be served if the ATS-6 back-up satellite were put into operation. Hopes the Dept. of Defense will discuss the matter with Alaska Representatives.

December 17, 1974 [C501]

Northrip (OT) memo to Gov. Hammond with summaries of major telecommunications issues pending. Attaches papers on RCA plan, White Alice, ATS-6, OT's statement of Alaska's Telecommunications requirements and role of OT. Of ATS-6 says, "It is already making significant progress in demonstrating the efficiency and low cost nature of a system which utilizes small, inexpensive earth stations in conjunction with a high power communications satellite. In a related area, the use of Alaska Native representatives to help plan the program content for ATS-6 is providing a model for future program development for whatever operational communication system the State may elect to choose."

January 13-15, 1975 [C529]

AK/RCA meeting to discuss state objections (technical and economic) to RCA's October submission. Six consultants for the State meet with RCA Alascom and RCA Globcom. Weatherly's (AEBC) letter of invitation to Lusignan (Stanford) dated Jan. 9 says, "I've indicated to RCA that I want the State to leave these meetings with all outstanding questions answered and a defined statement as to RCA's future in Alaska."

January 25, 1975 [C539]

Hilscher (OT) memo "For the Record" provides background on Alaska Communications and current situation. Says AK/RCA discussions are still continuing (following Jan. 13-15 meeting) and that RCA has asked the FCC for an additional ten days which is expected to be granted. "At the end of that time, a formal letter to the FCC will be sent from the State, outlining Alaska's views as to whether the RCA plan meets our needs, and what, if any, are still points of contention." On the subject of "experimental communications, education and health," she says that "The most important results of the demonstrations,[ATS-1 & ATS-6] however, is proving to commercial common carriers the technical feasibility of the low-cost ground station system."

February 14, 1975 [C566]

Gov. Hammond in a letter to FCC says the State "cannot endorse the RCA plan, as it is not based on a system designed for Alaska's unique needs."

February 21, 1975 [C570]

OT press release announces intent to issue RFP within two weeks for small earth station purchase. (RFP dated March 10, 1975.)

6, 975 [C584]

er (OT) memo to all Legislators reporting May 5 g of proposals for the State's procurement of all earth stations. As predicted by OT, pro- co s range from $40,000 - $50,000, completely iew. Complete evaluation will take 2-3 weeks being accomplished jointly with RCA.

. 1975 [C631]

mor ammond letter to FCC with notification ate intention to seek permission to build a m of satellite ground stations.

. 1 5 [C633]

a House approves $5 million appropriation for purchase of small earth terminals; Senate s on May 10.

1, 975 [C642A]

rage Daily Times reports that "The State has four outside firms to build components for ste ite earth stations which the state will se if it receives permission from the Federal ications Commission." Reports that Weatherly ays the first 13 requests for construction it will be filed by the state "this week." ag Daily News article on June 12 notes tance of proposals and announcement of the lings are the first solid evidence the state ef itely oppose recent filings by RCA to con- i own system of earth stations."

1, 975 [C650]

of Alaska & RCA Alascom sign agreement to uct 20 small satellite earth stations with nip o be decided by FCC at later date. List sites agreed upon.

3, 1975 [C652]

Dra of OT Alaska ATS-6 Health/Education Tele- ications Experiment Final Report says "The ALED project was a unique experiment - a first un for the State of Alaska to gain the exper- of perating a satellite programming network. per ent provided a first-hand demonstration of ctically of media technology in meeting the ications needs imposed by Alaska's rugged ter- an climate and sparse population...As a re- f t s experiment, GOT gained experience in a wide variety of areas directly relevant to the planning of a future statewide operational satellite network."

ATTACHMENT #2

[illegible]cal History: ESCD contributed substantially to the direction and rate of growth of the Alaska Office of [illegible]mmunications.

[illegible]15, 1971 [C50]

[illegible]ti[illegible]l Communications in Alaska" by [illegible]nce W. Templeton (Hammett & Edison) prepared [illegible]ne AEBC and the Ford Foundation, says "A [illegible]li[illegible] distribution system is the only feasible [illegible]d t[illegible] which educational television service can [illegible]ought to all Alaskans." Recommends that low [illegible] TV stations (mini-TV) be established until [illegible]li[illegible] issues are resolved. "In summary, because [illegible]te[illegible]ites, there appears to be no significant [illegible]ica[illegible] obstacles to the establishment of com-[illegible]ations service in any desired variety and [illegible]ity in Alaska within five years. To obtain [illegible]fa[illegible]bry service, the State must first decide [illegible]it[illegible] goals are, then initiate concrete and informed [illegible]ssion with suppliers, and be prepared to pay a [illegible]nable price. Because of the unusual inter-[illegible]ect[illegible]n problems in Alaska, the State may have to [illegible]an[illegible]nusually active part in defining require-[illegible]s and leading suppliers to offer what is needed."

[illegible]22, 1971 [C51]

[illegible]Eg[illegible] letter to Fletcher (NASA) noting recent [illegible]nc[illegible]ment of 2500 MH$_z$ ETV experiment on ATS-F, [illegible]sses Alaska's willingness to participate, [illegible]nt experience with ATS-1 and interest in having [illegible]ar[illegible] VHF audio capability on ATS-F. (Fletcher [illegible]) [illegible]ply of Aug. 18 says there is no VHF audio [illegible]cation for ATS-F or G but an audio experiment [illegible]e 2500 MH$_z$ band on ATS-F could be discussed. [illegible]ht[illegible] to hear of Alaska's willingness to parti-[illegible]e[illegible] 2500 MH$_z$ TV experiment; will ensure that [illegible]and CPB, who are coordinating the earth-based [illegible]ion, are notified of Alaska's desire to partici-[illegible].)

[illegible]st [illegible]0, 1971 [C55]

[illegible]lock (Attorney General) letter to Low (NASA) [illegible]cating no knowledge until this date of Oct. 1 [illegible]li[illegible] for detailed ATS-F application; requests [illegible]ns[illegible]n for AEBC Special Satellite Project [illegible]ittee to prepare application.

[illegible]ust 25, 1971 [C56]

[illegible]E[illegible]n letter to Fletcher (NASA) indicating [illegible]erest in further pursuing possible audio [illegible]eriment on ATS-F in addition to the TV experi-[illegible]; [illegible]esignating Arnold (AEBC) as representative [illegible]r p[illegible]rposes of experimental design and program-[illegible].

October 4, 1971 [C60]

Gov. Egan makes speech on satellite communications. Announces establishment on his staff of position of director of telecommunications planning. Responsibilities to include definitive statement of telecommunications requirements and coordination. (1st - Ed Hayden, 2nd - Charles Buck, 3rd - Marvin Weatherly, 4th - Robert Walp.)

January 24, 1973 [C132]

Arnold (AEBC) letters to Horley and Filep (HEW) and Marsten (NASA) notifying them that ATS-6 project transferred to Gov. Egan's Office of Telecommunications, headed by Buck (OT); that Arnold will continue to devote some 10% of his time to the plan and that he will attend Feb. 5 coordinating meeting with Buck.

January 30-31, 1973 [C133]

AEBC meeting in Juneau; Arnold reports that the ATS-F plan has been delivered to agencies in Washington, D.C. and Alaska for review but that fiscal restraints will result in a much more reduced program than he had been encouraged to submit and less innovative applications are likely. In addition, Gov. Egan has decided to move ATS-F to OT and Buck will go to Washington, D.C. with him Feb. 3 for a series of meetings. (Lind is among members attending AEBC meeting. Buck does not go to D.C.)

February 9, 1973 [C137]

Geiman (Region X) writes "Comments on Alaska/ATS-F Study." Would like to have seen more input. Sees it unfortunate the Consortium for ATS-1 does not view itself, nor was it included, with responsibility for F. "This is an unfortunate oversight if the lessons learned in the ATS-1 experiment are to be maximized for ATS-F." Sees insufficient consideration of alternate footprints. Feels proposed budget is far out of line with anticipated resources and is top-heavy. Notes management outdated as OT is now responsible for overall direction with DOE responsible for educational component. Sees educational perspective. Suggest future grants for the educational component go to DOE. Says OT has "prime responsibility" for coordination with medical component--such coordination is now not taking place.

February 13, 1973 [C139]

Neben (NCET) letter to Arnold (AEBC) (addressed "Coordinator - Alaska ATS-F") confirmation of conversation previous week with Filep and Horley. Expects proposal from OT with concurrence of Lind (DOE) by Feb. 19, 1973. Will notify in 24 hours of its acceptability. Expects he will already be working with Polley and Walp. Asks copy be sent Geiman (Region X). "I think it is rather unfortunate that so much time and effort was wasted in preparing what turned out to be an unrealistic plan for now. It would be equally unfortuante if lack of agreement among the elements of Alaska government were to cause the Alaska Telecommunications Project of ATS-F to fail to materialize."

February 23, 1973 [C142A]

Buck (OT) night letter to Horley (HEW) and Rubin (CPB) advising that Dr. Charles Northrip has been named satellite experimentation coordinator for Alaska and will function within OT. Requests current list of deadlines, necessary meetings, and agenda relating to ATS-F planning.

June 25, 1973 [C181]

Northrip (OT) memo to Buck (OT) says he is now convinced the ATS-F project needs TV studio capability; has talked to Department of Administration and sees no reason it couldn't be combined with other TV origination requirements in Juneau. Suggests size and location in Capitol building since ATS-F antenna is likely to be on top of that building.

July 13, 1973 [C187]

Taylor (OT) letter to Darnell (CNER) announcing the first planning session for the purpose of discussing the development of a pilot instructional program for ATS-F. Inviting a CNER representative to a July 19 meeting.

February 11, 1975 [C561]

Weatherly (OT) memo to Northrip (OT) says "we should push ahead with our planning to become involved with the CTS program." Asks Northrip to "establish necessary vehicle within GOT to bring as many agencies as possible into this program." Suggests McIntire move ahead as indicated in Feb. 3 memo and Taylor and Barril provide periodic written reports of their particular assignments to CTS.

February 21, 1975 [C570]

OT press release announces intent to issue RFP within two weeks for small earth station purchase. (RFP dated March 10, 1975.)

March 14, 1975 [C593]

Weatherly (OT) testimony before Alaska House Finance Committee on FY 76 OT budget request says that in previous years OT was a one-man office, that little policy-setting or planning was accomplished and that its chief function was oversight of the federally funded health and education satellite demonstration project, ATS-6. With change in adminstrations top priority has been placed on upgrading communications services to the entire state. Outlines tasks to be undertaken including promotion and supporting continued experimental projects, publishing a newsletter and operating production studio.

July 8, 1975 [C647]

Northrip (OT) letter to Lew (NASA) as formal letter of intent to apply for use of ATS-6 in its third year; objective to test the State's small (15 ft.) earth terminals and compare their operation with that of the 10 ft. dishes utilized in first year experimentation on ATS-6. Also plan to provide real test of S-band up and down-link capability within Alaska. Says state is prepared to send a representative to pre-proposal briefing at GSFC on July 30.

August 4, 1975 [C654]

Hupe (HEW/OTP) letter to Northrip (OT) says proposal to use the government-owned ATS-6/HET ground terminal equipment remaining in Alaska for experiments with 4/6 GHz satellites is acceptable to HEW/OTP and the Technical Committee. Stipulates that any modifications should be completely and inexpensively reversible keeping open the option of use with ATS-6 on its return. Says he will check with HEW Contracts Office to see if any further formalities are required to document this permission-to-use agreement.

ATTACHMENT #3

logical History: ESCD was responsible for the State of Alaska becoming involved in the production of pro-
specifically for its rural population.

5, 1973 [C181]

rip (OT) memo to Buck (OT) says he is now
ce the ATS-F project needs TV studio
lity; has talked to Department of Adminis-
n and sees no reason it couldn't be com-
wi other TV origination requirements in
. uggests size and location in Capitol
ng since ATS-F antenna is likely to be on
that building.

13, 1973 [C187]

( ) letter to Darnell (CNER) announcing
irs planning session for the purpose of
ssing the development of a pilot instruction-
ogram for ATS-F. Inviting a CNER representa-
to July 19 meeting.

ber 18, 1973 [C230]

d NWREL sign agreement for services not to
$220,457 through February 18, 1975. Work
ment includes: provision of 160 lesson designs
CE BOLD and ME, lesson guides, teacher's
, nd specifications for producer. Specific-
excludes: script writers. Specifies major
n work will take place in Anchorage.

20, 1974 [C285]

(D) memo to Northrip (OT) in official
ic ion that DOE assumes responsibility for
er In Service Training on ATS-6. Mentions
force, coordination with KUAC and OT in
uct n and independent evaluation. Names
lou adden as TIST liaison and DOE repre-
ati e for total education experiment.
st task force meeting (during May) included
esentatives from SDE, ASOSS, NEA, BIA, NWREL.)

ember 30, 1974 [C417]

rop al to CPB for $49,500 to allow production
E pilot, improve visuals in interactive por-
s of ATS-6 programs, and allow editing of ANN
30 inute, non-dated programs to be distribu-
to aska public TV stations via video tape.
mis [CPB] letter of Jan. 28, 1975, awarded
grant.)

ATTACHMENT #4

[redacted]ka becomes charter member of Public Service Satellite Consortum (PSSC) dedicated to the use of satellites for [redacted]al service delivery.

[redacted]mber 4-6, 1974 [C453]

[redacted]se[redacted] Frank Nelson to Palo Alto as AK represen-[redacted]ve [redacted] "Planning Session of Educational TV Market [redacted]ation." (See also Nov. 20, 1974)

[redacted]mbe[redacted]9, 1974 [C493]

[redacted]cation U.S.A." reports a new federal policy of [redacted]ndi[redacted]g on commercial satellites for health and [redacted]cat[redacted]n services. HEW is trying to establish a [redacted]sortium of users for commercially-owned satellite. [redacted] to provide "initial fiscal incentives." OMB en-[redacted]res[redacted]ew policy, believing federal efforts should [redacted]lim[redacted]ed to experimental use. OTP says "Although [redacted]commercial satellites are now available, several [redacted] being developed." Notes four years left on [redacted]-F after use in India, but according to OTP, it [redacted] no[redacted] even return from India.

[redacted]emb[redacted] 18-20, 1974 [C505]

[redacted].C formed at meeting in Denver. Establishes 11 [redacted]ber steering committee which includes Weatherly [redacted]). Consortium anticipates engaging only in the [redacted]vis[redacted]n of communications services with no pro-[redacted]ctio[redacted] distribution or marketing of the program-[redacted]g by PSSC itself.

[redacted]ruary 6, 1975 [C557]

[redacted]ever[redacted] (U.S. Senator-AK) letter to Mallott (AFN) [redacted] res[redacted]onse to his letter of January 30 regarding [redacted]ncern for a follow-on to the ATS-6 experiment. [redacted]s original follow-on, ATS-G, killed by OMB deci-[redacted]on [redacted] get NASA out of communications satellite [redacted]sin[redacted]s. Points to PSSC as "a group of users from [redacted] o[redacted]r the country banning together to comment on [redacted]e type of service needed in rural areas. It is [redacted] hope that these users will accomplish what ATS-6 [redacted]s e[redacted]ectively demonstrated."

[redacted]ly [redacted] 1975 [C646]

[redacted]SC meeting planned in San Diego for consortium [redacted]bscribers and steering committee to elect Board [redacted] Di[redacted]ctors. (Weatherly [OT], one of four new [redacted]poi[redacted]ees to the interim board, according to CPB [redacted]port, Aug. 4, 1975.)

[redacted]

[redacted]

[redacted]

ATTACHMENT #5

nological History: Other indicators of lasting benefits derived from ESCD-Alaska.

er , 1974 [C431]

een US Senators sign letter to Pres. Ford g him to reconsider termination of the ATS am nd fund follow-on satellite to ATS-6. sa llite has performed extremely well" the r continues, and "after such a promising start, ould not interrupt a service which will pro- ne th and educational benefits to students, er and the sick." (Stevens [R-AK] was one e signers.)

er 6, 1974 [C470]

est Adult Education Association Conference in ne dopts resolution calling for extension of a tellite communication experiment beyond lanned one year to at least a five year period hat serious consideration be given to expanding ro ss, content and benefits throughout North- Am ica.

er 0, 1974 [C430]

(KYUK) letter to Hartman (KUAC) requesting f ANM video tapes for airing in Bethel. (Broad- t be in in January. Three-way correspondence en YUK, KUAC and OT to obtain necessary per- on continues through Feb. 15.)

er 9, 1974 [C506]

nder (PHS) letter to Taylor (OT) requesting ss n to purchase a set of video tape copies gh On! from KUAC-TV. Offers congratulations e quality of the programs. (Permission granted rthrip (OT) letter of February 28.)

ber 30, 1974 [C518]

(KUAC) letter to Taylor (OT) requesting permis- to release ANM over Alyeska Pipeline Service Co. ower TV system to serve eighteen camps north e Yukon on one-day delay. (Permission granted rri (OT) letter of Jan. 9.)

ry 6, 1975 [C523]

(State Library) letter to Northrip (OT) con- ng discussions to have Alaska Library Network ate video copies of ATS-F series. (Additional le er of same date requests a complete set on! programs. Permission to purchase Right ranted in Northrip letter of Feb. 28.)

ry 1975 [C525]

(KUAC) letter to Taylor (OT) indicating that V, Channel 2 in Fairbanks wants to air ANM equesting permission to release the program m.

February 11, 1975 [C562]

Reed (Principal, Capital School, Juneau) letter to Taylor (OT) requesting viewing of Right On! video cassettes for Capital School students.

February 28, 1975 [C578]

Taylor (OT) letter to Mudd (BIA, Bethel) describing procedure (discussed on telephone) necessary to request permission and purchase of video tape copies of Right On! (Mudd reply of March 5 indicates intent to purchase series.)

March 25, 1975 [C597]

Helm (Canadian R-TV commission, Northern Service) letter to Taylor (OT) requesting preview copies of satellite programming including interaction. (Taylor reply of April 14 indicates cassettes can be sent to OT for copies to be made.)

March 26, 1975 [C599]

Porcaro (AEBC) letter to Upham (KUAC) requesting back copies of ANM for patients' viewing at Alaska Native Medical Center (PHS) in Anchorage. (KUAC forwarded request to OT; Taylor reply of April 28 indicates dubbing costs will have to be paid by hospital and that some programs may not be available due to "one-time-only" clearance on some film footage.)

April 1, 1975 [C606]

Upham (KUAC) letter to Taylor (OT) requesting permission for KUAC-TV to air Amy & the Astros and Right On! five days a week beginning in September. (Taylor reply of April 14 grants permission and requests that master tapes be used only for dubbing, not shipping or broadcasting.)

April 16, 1975 [C614]

Loew and A. Smith (ASOSS) letter to Taylor (OT) requesting permission to purchase video tape copies of Right On! for distribution by ASOSS media center (Percy) to State Operated Schools.

April 24, 1975 [C621]

Upham (KUAC) letter to Northrip (OT) mentioning current use of ANM over Channel 9, live and rebroadcast, and supporting Hartman's request to edit the series to 13 half hours. Feels feature material has "lasting values" that will be apparent when the material is extracted from the present form. (Letter of support from Jackson (KAKM, public broadcasting, Anchorage) also.)

ATTACHMENT #6

[redacted]ogical History: Experiment planning and funding.

[redacted]1972 [C82]

[redacted]sal to Develop a Plan for Alaska's [redacted]nd Innovative Education Demonstrations [redacted]TS-F". Submitted by Robert Arnold [redacted]o [redacted] Horley (HEW). Duration: April [redacted]us[redacted]15, 1972. Requested funds: $45,000. [redacted]n by Arnold and Northrip to obtain plan[redacted]ney)

[redacted]1972 . [C89]

AE[redacted]) notifies Gov. Egan and Lind (DOE) [redacted] of ATS-F planning contract for $44,850

[redacted]1972 [C94]

[redacted]E) [redacted]tter to Koenig (BLET) stating that the [redacted]f [redacted]ducational telecommunications has be[redacted]cially important to DOE which has a tenous [redacted]ship to AEBC since it is "in reality more of [redacted] broadcast commission." Lind intends to [redacted]re[redacted]presentative assigned directly to him and [redacted]US[redacted] discretionary funds might be suitably [redacted]equests consideration of this plan.

[redacted]- 22, 1972 [C101]

[redacted]es[redacted] Program Plans" submitted by AEBC [redacted]EBC [redacted]lan). Includes medical components.

[redacted]197[redacted] [C118]

[redacted]TS-F Health/Education Telecommunications [redacted]: Program Plans" submitted by AEBC [redacted]p[redacted]) to USOE. (Proposes approximately [redacted]wh[redacted] will receive TV and provide two-[redacted]; 5 sites will transmit video; program [redacted]include Teacher Training, viewer defined [redacted]g[redacted] library information, CAI, health edu[redacted]d [redacted]S/NPR interconnect. University of [redacted]medical plans are not included. Bud[redacted].1 million including evaluation, hard[redacted]pr[redacted]duction equipment. Anticipate use [redacted]ty [redacted]ssistants and an Applications User [redacted]. [redacted]oject to be directed by AEBC.)

[redacted]19[redacted]3 [C126]

[redacted]") memo to Filep (NCET) on status of [redacted]u[redacted]ications project (ATS-1 & F), the [redacted]ri[redacted] were transferred to him on Jan. 2. [redacted]e [redacted]entifies include: (1) there appear [redacted]ral different people representing the [redacted]- [redacted]ie negotiations. Attached is a draft [redacted]- [redacted] Bill McLaughlin in Seattle request[redacted]is[redacted]nce in sorting out the players;and [redacted]s contract with Arnold on ATS-F "... is completely separate from the current activities being conducted with ATS-1 under Title III and MDTA."

January 8, 1973 [C127]

Arnold (AEBC) letter to Horley (HEW) enclosing Dec. ATS-F program plan and seeking contract extension for refinement of plan. Additional funds requested: $35,000 through June 30, 1973. (cc to Lind and Buck. Letter mailed Jan. 17, 1973?)

January 24, 1973 [C131]

Lind (DOE) letter to Filep (NCET) reaffirming commitment of DOE "to utilize the potential of ATS-F to meet educational needs" in a "natural extension of the work accomplished by the AEBC report on ATS-F." Cites statewide needs assessment and initial thinking on three levels of usage with detailed proposal to be available at a later date. (cc: Buck, Arnold, McLaughlin, Neben)

January 30-31, 1973 [C133]

AEBC meeting in Juneau; Arnold reports that the ATS-F plan has been delivered to agencies in Washington, D.C. and Alaska for review but that fiscal restraints will result in a much more reduced program than he had been encouraged to submit and less innovative applications are likely. In addition, Gov. Egan has decided to move ATS-F to OT and Buck will go to Washington, D.C. with him Feb. 3 for a series of meetings. (Lind is among members attending AEBC meeting. Buck does not go to D.C.)

February 1, 1973 [C134]

Lind (DOE) submits Planning Statement "ATS-F and Educational Usage: Phase I" Proposes project coordinator located at DOE. (Distributed by Polley (DOE) at Feb. 5 meeting in Washington.)

February 13, 1973 [C139]

Neben (NCET) letter to Arnold (AEBC) (addressed "Coordinator - Alaska ATS-F") confirmation of conversation previous week with Filep and Horley. Expects proposal from OT with concurrence of Lind (DOE) by Feb. 19, 1973. Will notify in 24 hours of its acceptability. Expects he will already be working with Polley and Walp. Asks copy be sent Geiman (Region X). "I think it is rather unfortunate that so much time and effort was wasted in preparing what turned out to be an unrealistic plan for now. It would be equally unfortuante if lack of agreement among the elements of Alaska government were to cause the Alaska Telecommunications Project of ATS-F to fail to materialize."

February 15, 1973 [C140]

Arnold (AEBC) letter to Neben (NCET) responding to Feb. 13, 1973 request for revised proposal by Feb. 19. Expects to work with DOE and meet Filep's (NCET) March 1 milestone for receipt of revision. Notes confusion at Feb. 5 meeting due to failure of Neben's office to advise Arnold of its views regarding submitted plan or to meet with Arnold when in Alaska in Jan. Also notes delay in notifying him that four of six components proposed were unacceptable.

March 12, 1973 [C148]

Arnold (AEBC) letter to Davis (Ford Foundation) (in response to March 1 letter which included question about amount of ATS-F funding) says "We weren't led to believe that $4 million would be available, but no ceiling was ever imposed. We were asked to identify alternative applications and portray what each would cost, and then funding agencies would review that (sic) alternatives and decide what they might support. Unfortunately, the National Center for Educational Technology, which was furnished a copy of the proposal in mid-December, didn't ever provide us with a review."

March 13, 1973 [C149]

National Council on Educational Research (NIE) is requested to concur that Educational Technology Satellite Demonstrations are being transferred from OE to NIE, to be continued at projected funding levels through June, 1975. It projects FY '74 and '75 requests to NIE from Alaska will be about $775,000 and $500,000. Total project funds from NIE for FY '74 and FY '75 are estimated at approx. $5,125,000 and $4,650,000. Notes OE funds to AK for FY '73 at about $50,000 and for the total project at $5,270,000.

May 10, 1973 [C165]

HEW awards OT $50,000 grant under Cooperative Research Act (Public Law 531) for grantee proposal dated February 1973, as amended March 26, 1973. Project Officer: Neben.

May 11, 1973 [C166]

"Alaska ATS-F Planned Activities: July 1, 1973-June 30, 1974" submitted by OT to NCET. (Lists planned activities, staffing and budgets for FY '74 totaling $871,900; requesting $774,900 in FY '74 from NCET.)

May 31, 1973 [C171]

Northrip (OT) memo to Buck (OT) on May 20-25 trip to Washington, D.C. reporting that Neben (NCET) has received $774,900 OT proposal and indicated that if HEW goes into FY '74 continuing resolution, funds will be available almost immediately; left Neben a copy of Melvin Charlie's (AS055/ATS-1) resume. Neben says he will remain at USOE when satellite projects move to NIE. Also met with Glennan (NIE) and discussed selection of new Alaska project director, previous internal wrangling at HEW, and individuals Alaska would not be pleased to have as project officer. Rubin (CPB) making commitment to fund $62-65,000 of certain portions and simply needs paperwork by June 30. Horley (HEW) intends to give OT a contract soon for installation and maintenance. Medical communities money for that will also go through Horley and could be included in OT contract if medical people want it that way.

June 25, 1973 [C182]

Northrip (OT) letter to Filep (NCET) expressing doubt that FY '74 funding of possible $775,000 will be enough for installation and maintenance in addition to software and program administration. Perhaps $500,000 ear-marked for FY '75 could be anticipated and some programming and administration expenses deferred if there is no way to fund installation and maintenance outside of the $775,000.

August 2, 1973 [C193]

Buck (OT) memo to Wiley (Gov. Egan's Administrative Assistant) describes funding shift from NCET to NIE and says "We have learned this week from Dr. Grayson that the specific 1974 funding request for $775,000...has not been acted upon due to the bureaucratic shift in program administration" and that proposal must be revised. Proposes to travel to Washington with Northrip week of Aug. 13 to submit revision and meet with key contacts at HEW, NASA, FCC, CPB.

August 1973 [C192]

"Alaska ATS-F Planned Activities: July 1, 1973 - June 30, 1974" submitted by OT to NIE. Budget totals $987,349; requesting $774,900 in FY '74 from NIE. (Replaces proposal previously submitted to NCET, May 11, 1973.)

November 6, 1973 [C219]

Northrip (OT) letter to Morrill (HEW) thanking him for Oct. 31 meeting and saying that Melmed and Grayson (NIE) phone call on Nov. 2 may have made progress toward NIE-Alaska agreement. Suggests cost-reimbursement contract if necessary and reiterates that delays in major funding decisions are the only reason Alaska's ATS-F program is not further along.

- 23, 1973 [C223]

ayson (NIE) through Melmed and Wise an NIE) on the status of the Alaska e project. Notes an agreement has been with OT to support the project through E. bject to funds available and OT satisdevelopment. Agreement also includes te review about May '74; OT required to -generated criteria of accomplishment; proval of subcontractors (finds UA and ceptable possibilities). Wormwood and to Juneau Nov. 27 to negotiate contract .

- 20, 1973 [C232A]

rds T $550,000 for FY '74 based on August pos modified by sub-contracts for content ment (NWREL) and production (KUAC) and a milestones to be met by March 15, 1974. ter to continue support 1 additional year to available funds and above conditions. sti ted cost for 2 years ending June 30, 1,490,000. Three no-cost extensions were for the periods June 30 - July 31, July st , and Aug. 15-31 as OT and NIE negoove ECE and BOLD.)

'974 [C259]

/ATS-F Health/Education Telecommunications ent: Program Plan" published by OT. bu et totals $873,381 with $550,000 E FY 74.)
budget totals $971,000; $840,000 from $131,000 from HEW)

'8, 1974 [C264A]

contract for program production totals 3. through 6/30/75 with FY '75 funding ent on NIE.

me 1974 [C309]

nd Buck (OT) meet with Grayson and d IE) in Washington; Buck memo to Gov. te July 26 says this meeting was the ndication that NIE was contemplating BOLD and ECE "...as a result of a site co ucted by a group of visiting experts e uth 48 who expressed serious doubts the quality and effectiveness of the s." Says that as a result of their s jections, Grayson agreed to a review tw programs with results promised by and $100,000 contingent upon results review.

July 12, 1974 [C325]

Buck (OT) letter to Grayson (NIE) enclosing revised work statements, milestone schedules, and budgets. FY 75 request limited to $680,000 as specified on June 27; looking forward to favorable reviews on ECE and BOLD and the addition of $100,000 to FY 75.

July 19, 1974 [C332]

Grayson (NIE) letter to Buck (OT) noting receipt of revised work statement, schedules and budget. Says there has been misunderstanding of June 27 agreement. Says NIE agrees to support all aspects of proposed AK project except production of ECE and BOLD, these to be considered separately, with decision no later than Aug. 30. As a terminal contract, will consider budget for all other work, not to exceed $550,000. Additional for ECE and BOLD should not exceed $100,000.

July 26, 1974 [C338]

Buck (OT) memo to Gov. Egan says the July 23-25 negotiation meeting with NIE in Washington, D.C. resulted in OT acceptance of $609,193 for FY 75 with contract to be available for signing Aug. 2. ECE and BOLD decision due no later than Aug. 30 and if review is favorable, $100,000 will be added to FY 75.

September 12, 1974 [C399]

Grayson (NIE) letter to Buck (OT) confirming phone call of Sept. 3 in that "NIE's decision to support BOLD effort has been temporarily suspended. Even though the programming appears beneficial, NIE must await resolution of its FY '75 appropriation before we can commit any additional monies to the program. No objections to OT seeking funds elsewhere.

September 16, 1974 [C402]

NIE issues OT fixed price contract ($609,193) for the period July 1, 1974 - Sept. 30, 1975. (If both BOLD or ECE are accepted by NIE, indicates the contract will be increased by no more than $100,000. Requires bi-weekly status reports and a final report draft and project analysis.)

September 27, 1974 [C416]

Lang (AFN) and R. Mallott (AFN and HE Consumer Committee) send telegrams to Gov. Egan, urging special funding consideration be given to complete the ATS-F experiment regardless of the fate of NIE's overall budget.

October 9, 1974 [C428]

Melmed (NIE) letter to Buck (OT) noting receipt of resolutions from Early Childhood Consumer Committee sent Sept. 26. Notes that such "... sentiments are to be expected after having spent a great deal of time and energy in the development of the programs ..." Says NIE will support BOLD with an additional $55,000 if adequate appropriation is received. May not have any further information until Nov. 12. Reminds OT that decision to proceed with BOLD is made with the understanding "that NIE may not reimburse OT for any funds spent in connection with that production."

March 7, 1975 [C585]

Northrip (OT) letter to Wormwood (NIE) requesting extension of deadline for final report outline from February 28 to March 31. "Since a decision on final funding for (BOLD) was not received by this office from NIE until mid-February 1975 it was impossible for an outline of the final report to even be in preparation..." Foresees no difficulties in meeting first draft deadline of May 30 or final version deadline of September 30.

ATTACHMENT #7

notorical History: A single individual or organization should be identified as the experiment focal point.

ry , 1973 [C126]

(NCET) memo to Filep (NCET) on status of ecommunications project (ATS-1 & F), the of which were transferred to him on Jan. 2. sms e identifies include: (1) there appear several different people representing the of AK in negotiations. Attached is a draft et r to Bill McLaughlin in Seattle request- s sistance in sorting out the players;and rley's contract with Arnold on ATS-F "... pletely separate from the current activities co ucted with ATS-1 under Title III and

ry 8 1973 [C128]

(NCET) letter to McLaughlin (Region X) telling has recently assigned Neben (NCET) to monitor sa llite utilization project, in charge of a future initiatives. Neben reports confu- responsibility within Alaska as illustrated ttached letters from Lind (DOE). Notes Lind ts support for Arnold (AEBC) in Feb. (2/24/72) , b in 6/30/72 letter "implies second thoughts." nor rip, too, figures in somehow. Requests he Lind (DOE) and Gov. Egan "to help us determine ropriate spokesman for Alaska. I believe it e ry beneficial to have a single spokesman S te and a single spokesman for HEW."

24 1973 [C131]

DE) letter to Filep (NCET) reaffirming com- of DOE "to utilize the potential of ATS-F ed ational needs" in a "natural exten- th work accomplished by the AEBC report ." Cites statewide needs assessment and thinking on three levels of usage with de- ro sal to be available at a later date. k, rnold, McLaughlin, Neben)

24 1973 [C132]

AE) letters to Horley and Filep (HEW) en (NASA) notifying them that ATS-6 transferred to Gov. Egan's Office of Tele- ti s, headed by Buck (OT); that Arnold ti to devote some 10% of his time to and that he will attend Feb. 5 coordina- ting with Buck.

1, 1973 [C134]

) s mits Planning Statement "ATS-F and l sage: Phase I" Proposes project coor- ocated at DOE. (Distributed by Polley eb. 5 meeting in Washington.)

February 5, 1973 [C135]

HET fourth Working Group meeting. Attending for AK: Arnold (AEBC), Polley (DOE), and Walp (AEBC). Also present: Geiman (Region X). AK represented by AEBC and DOE, with two different proposals. Neben (NCET) presents Alaska report. "...a long discussion developed concerning the question of when Alaska will become able to speak for itself...." Feiner (Lister Hill) discusses frequency problem.

February 9, 1973 [C137]

Geiman (Region X) writes "Comments on Alaska/ATS-F Study." Would like to have seen more input. Sees it unfortunate the Consortium for ATS-1 does not view itself, nor was it included, with responsibility for F. "This is an unfortunate oversight if the lessons learned in the ATS-1 experiment are to be maximized for ATS-F." Sees insufficient consideration of alternate footprints. Feels proposed budget is far out of line with anticipated resources and is top-heavy. Notes management outdated as OT is now responsible for overall direction with DOE responsible for educational component. Sees educational perspective. Suggest future grants for the educational component go to DOE. Says OT has "prime responsibility" for coordination with medical component--such coordination is now not taking place.

February 13, 1973 [C139]

Neben (NCET) letter to Arnold (AEBC) (addressed "Coordinator - Alaska ATS-F") confirmation of conversation previous week with Filep and Horley. Expects proposal from OT with concurrence of Lind (DOE) by Feb. 19, 1973. Will notify in 24 hours of its acceptability. Expects he will already be working with Polley and Walp. Asks copy be sent Geiman (Region X). "I think it is rather unfortunate that so much time and effort was wasted in preparing what turned out to be an unrealistic plan for now. It would be equally unfortuante if lack of agreement among the elements of Alaska government were to cause the Alaska Telecommunications Project of ATS-F to fail to materialize."

February 2 , 1973 [C142A]

Buck (OT) night letter to Horley (HEW) and Rubin (CPB) advising that Dr. Charles Northrip has been named satellite experimentation coordinator for Alaska and will function within OT. Requests current list of deadlines, necessary meetings, and agenda relating to ATS-F planning.

November 29, 1973 [C226]

Buck (OI) memo to Gov. Egan enclosing two pages of the "HEW Region X Annual Report for 1973" pertaining to AIS-F. Says "previously fragmented and weak efforts" now pulled together by new office (OI) and was "a direct result of Region X involvement." Says for several months AK was almost dropped from AIS-F project "because of missed proposal deadlines and generally poor effort." Sees this as connected. Recommends that major federal Administrative responsibility be placed in Region X to shorten lines of communication, noting "Past federal performance has been detrimental to sound development."

ATTACHMENT #8

ological History: Responsibilities of a lay Consumer Committee which appear to be satisfactorily handled
limitations.

[illegible] 23, 1973 [C216]

with OT-(Grayson (NIE) and Northrip and [illegible]T)) - reported by Wormwood (NIE) memo of [illegible] file. Discussed preliminary feedback [illegible]te review. NIE saw real management problems [illegible]rd to being operational by April '75; [illegible]d continued need for Native input; and [illegible]ed 3-month additional planning period [illegible]o commitment with a shortened telecast time. noted that "Alaskan program should contain [illegible]ve and summative evaluation to the extent [illegible]appropriate for the successful implementa- [illegible] the project." Northrip indicated Buck [illegible] Lind (DOE) criticism of site team and [illegible]ed he was "under considerable pressure [illegible]it protest."

[illegible] 5, 1973 [C218]

([illegible]) prepares "Composite Review" from [illegible] of individual NIE site visit team members. [illegible] include proposal needs and objectives; [illegible]at[illegible]e involvement; programs; staffing; [illegible]ti[illegible]al relationships; production; resi- [illegible]ects; and management. Conclusions include: [illegible]ld not commit funds as project is current- [illegible]ed[illegible]nd managed; NIE should fund a limited [illegible] p[illegible]se to allow OT revision; NIE team [illegible]n review OT documentation, visit Alaska, [illegible]are recommendations; NIE funding decision [illegible]n[illegible]e made about support through conclu- [illegible]th[illegible] project. "In summary, the team found [illegible]s [illegible]forts on this project to date have [illegible]mal with respect to the great amount of [illegible]e accomplished, but do not auger well [illegible]cc[illegible]sful experiment. But, the needs of [illegible]ti[illegible] exist. OT should be required to [illegible]ate that they can do the necessary work in [illegible] available before NIE commits full funding [illegible]pro[illegible]ct."

[illegible]em[illegible]r 1973 (or before) [C227]

[illegible]OT[illegible] letter to all AIS-F villages enclos- [illegible]y of project and explaining establish- [illegible]ree Consumer Committees. Tentatively [illegible]fi[illegible] meeting of BOLD and ECE for [illegible]t[illegible] December or middle of January in [illegible]. Requests name of a representative so [illegible]l arrangements can be made.

[illegible]1, 1974 [C249]

[illegible]o[illegible] Understanding between OT, KUAC, and [illegible]rd[illegible]g role and responsibilities of con- [illegible]ittees. Specifies that the committees [illegible]rs to OT; that they may approve, dis- [illegible]a[illegible]er the material presented by NWREL [illegible]p[illegible]s of all characterizations and other [illegible]v[illegible]duals and sets presented by KUAC.

February 19-21, 1974 [C253]

Consumer Committees for Health Education (HE), Basic Oral Language Development (BOLD), and Early Childhood Education (ECE) meet for the first time. NWREL presents "Roles and Responsibilities of Consumer Committees," "Topics for Discussion" and "Survey of Needs of Children." Three committees meet separately to consider series goals and priorities.

February 20, 1974 [C254]

NWREL meeting agenda for Health Education Consumer Committee includes review of: puppet and set designs; characterizations; final program designs # 1-6, preliminary program designs #7-16; lesson sequencing (canned and original); series title; and canned material.

April 18-19, 1974 [C274]

Consumer committees for BOLD, ECE, and HE meet in Anchorage to review six preliminary lesson designs and overall design of programs. ECE group petitions OT for rescheduling of ECE time slot to avoid early evening showing in southeastern Alaska.

May 3, 1974 [C278]

Taylor (OT) letter to Bryan (NWREL) notifying him that all designs must arrive at KUAC and OT five days before each Consumer Committee meeting and setting conditions of availability of KUAC and NWREL before and during the meetings.

June 5-6, 1974 [C289]

Consumer committees for BOLD, ECE, and HE meet in Fairbanks. BOLD and HE select titles, approve 16 lesson designs and select representative to be available for consultation during summer. BOLD series is *Amy and the Astros*. HE is *Right On!* Taylor announces that teacher orientation will be Sept. 9-13 and programs will begin airing on the satellite Sept. 16.

Jure 5, 1974 [C291]

OT/NWREL/KUAC meet following consumer committee. KUAC objects to number of puppets and Dr. Good character in HE as too expensive. NWREL feels KUAC knew about Dr. Good because of earlier designs and telephone conversations. Taylor (OT) says the misunderstanding seems to be because KUAC did not see specifications until a few hours before the consumer committee meeting. KUAC says BOLD seems to have no problems. No decision made on ECE series; filming story teller on location may be too expensive and

Consumer Committee thought it could be done in a classroom. An impressionistic school room (studio?) is another alternative suggested by NWREL but no decision is made. Some uncertainty about what kinds of decisions the summer representatives of the Consumer Committees are empowered to make by the other members.

June 17, 1974 [C295]

Hartman (KUAC) notes on conversation with Hamilton (NWREL) in Juneau. Discussion of NWREL staff budget; that NIE may be asking Alaska to reverse the consumer committee input; that finally-authorized designs have not yet been turned over to writers; that KUAC and NWREL agree that Native legends should be shot on locations in village and double-used. "We need a team approach as NIE suggests. Not a spirit of 'friendly competition.'"

June 18, 1974 [C298]

"Alaska ATS-6 Project Responses," provides OT's answers to first 30 modifications of the project suggested in the Composite Review of the April 29 - May 2 NIE site visit. (Does not respond to last 3 modifications which suggest that OT is too dependent on the sub-contracts with KUAC and NWREL; that the project should have educational impact; and that OT should begin managing rather than supervising.) Responses include support of ECE on basis of: (1) promises made to CC and (2) soundness of concept.

July 1, 1974 [C314]

First consumer committee meeting for viewer defined program in Fairbanks. Title, Alaska Native Magazine (ANM), and first six program topics approved with list of additional subjects. Other discussion: format, use of native profile and state news in each program, avoidance of bureaucratic language and overly slick production, role of utilization aides in encouraging participation in interaction.

July 2, 1974 [C315]

OT/NWREL/KUAC meet following Consumer Committee. KUAC says HE has too many characters and voices to be practical. Decision postponed until later date. Taylor (OT) points out that late arrival of preliminary designs at KUAC helped cause the problem and delivery must be made earlier in the future.

July 7, 1974 [C318]

Hamilton (NWREL) letter to Northrip (OT) as a preliminary report of accomplishments lists literature search for ECE, BOLD, and HE; presentation of tentative and alternative program goals to Feb 21-22 consumer committee; six preliminary designs presented April 18-19; six final and ten additional preliminary designs approved June 5-6 with some modifications to be made in HE to meet production requirements. Notes NWREL contract modified by OT to reduce number of BOLD programs from 64 to 32. Attaches revised schedule. Praises OT/KUAC/NWREL working relationship and says "The Consumer Committees as coordinated by your office have been especially effective in their selection of alternatives, their input into the designs and their thoughtful review and approval procedures."

July 21, 1974 [C335]

Hartman (KUAC) memo to Conyer (KUAC) enclosing HE lesson designs which have changes requested by the consumer committee. Suggests checking with Bruggeman (NWREL) to see if other designs in KUAC file are correct and using designs to help in script analysis prior to beginning production efforts.

August 12, 1974 [C358]

Alaska Native Magazine consumer committee meeting in Fairbanks. Further discussion of program topics and reiteration that pace can and should be "slower"; that various features and interaction are experimental and should be changed as the series proceeds; that OT and the committee should be notified if the ANM staff desires to make substantial departures from meeting decisions; and that the film crew should not go into villages with too many preconceived ideas about treatment of subjects.

August 28, 1974 [C374]

Northrip (OT) letter to Hartman (KUAC) in answer to a variety of questions sent beginning in July. Includes such things as: Consumer Committee is advisee to OT; OT will order any "holds" on satellite transmission; policy commitment to Native translations on ANM is strong; script writing responsibility will be shifted contractually to NWREL; have no idea what ECE and BOLD final decisions will be made, except for a change in number of ECE programs.

September 5-6, 1974 [C386]

Consumer Committees for BOLD, ECE, and HE meet in Juneau. Learn of NIE suspension of BOLD and ECE over the summer. Resolution by ECE group in favor of reinstatement is passed by combined group. Urges OT to seek substitute funding. Recommend reinstatement in Jan. 1975. Tapes of first four HE programs are shown. BOLD committee learns about suspension of program over the summer and reinstatement. Sees copy of script # 1 and learns that production will begin immediately.

86

[redacted]ember 9, 1974 [C390]

[redacted]geman (NWREL) letter to Hartman (KUAC) noting [redacted]su[redacted] at concluding CC meeting without major [redacted]/NWREL conflicts. Notes value of having [redacted]ucer present to explain limitation and alter-[redacted]ves as CC suggestions for scripting were often [redacted]al[redacted]tic. "My personal opinion is that if KUAC [redacted]res[redacted]tatives had actively participated in CC [redacted]ings simce January we all could have avoided [redacted] of the grief or confusion we've been through." [redacted]s [redacted]nsumers liked Millie - typical Native [redacted]th[redacted]ide. Will try to adjust scripts to [redacted] her.

[redacted]em[redacted]er 26, 1974 [C415]

[redacted] (OT) letter to Melmed (NIE) attaching resolu-[redacted]ns [redacted]om combined Consumer Committee concerning [redacted]el[redacted]tion of ECE. OT feels Consumer Committee [redacted]tion will be even more critical if NIE cannot [redacted].ow through on $55,000 on BOLD - a possibility [redacted]es[redacted]d by Grayson (NIE) earlier this month.

[redacted]ber 9, 1974 [C429]

[redacted]ka[redacted]ative Magazine Consumer Committee meeting [redacted]cusses upcoming program topics; spacing of seg-[redacted]s; statewide approach using several sites as [redacted]pl[redacted] for each topic; and willingness to "tell [redacted]ik[redacted]it is" as long as presentat[redacted]ons are factual [redacted] fair.

[redacted]ber 31 - November 1, 1974 [C448]

[redacted]mmar Committee for BOLD and NE have final [redacted]ting[redacted](in Anchorage). Members of ECE split up to [redacted] o[redacted]er two. Entire group watches Amy and the [redacted]os #5 and Right On! 13. (First formal viewing [redacted]JLD.) BOLD members express dissatisfaction: [redacted]Pu[redacted]ets do not meet specifications (Princiotta [redacted]ins[redacted] changes), and (2) children inattentive to [redacted]eraction segments.

[redacted]mb[redacted] 5, 1974 [C454]

[redacted]geman (NWREL) letter to Conyer (KUAC) in re-[redacted]se[redacted]o memo from him agrees to delete an NE seg-[redacted]t f[redacted] which music clearance hasn't arrived; to [redacted]act Princiotta about delivery of puppet cos-[redacted]s; and encloses a revised lesson design for a [redacted]ra[redacted]eliminated by the Consumer Committee. [redacted]ve[redacted]s memo, written after he had attended [redacted]. 31 Nov. 1 committee meeting says he is [redacted] writing because I have been informed that I [redacted] no longer call you unless it's an extreme [redacted]ge[redacted]y. Just another one for the files.")

[redacted]mb[redacted] 12-13, 1974 [C465]

[redacted]ka[redacted]ative Magazine Consumer Committee meeting. [redacted] 8 programs planned. Discussion about amount of [redacted]; difficulties in getting "grass-roots" people [redacted]an[redacted]s; and need for more variety.

November 13, 1974 [C466]

Hartman (KUAC) letter to Northrip (OT) says KUAC professional staff and management "share a virtually unanimous reaction to the BOLD programs. We are disappointed in them, and disapprove of them on the basis that they are not only poor television, but more importantly, are poor instruction ... the scripts are the basic liability .." Lists dramatic deficiencies of scripts 1-14 and says "we do not feel one can successfully employ the dramatic form and consistently disregard its conventions." Withdraws KUAC's credit from the productions and says they will do everything possible to produce best instructional programs possible from designs and scripts submitted by NWREL. (Letter recalled and returned from OT unopened.)

November 18, 1974 [C473]

Buck (OT) letter to Grayson (NIE) with informal comments on programs from sites. Says negative comments are mostly about interactive portions and OT is experimenting with methods of improvement; consumer committee have viewed samples of programs and are very pleased. DOE is planning a more formal survey of response as the year progresses.

December 18, 1974 [C504]

Alaska Native Magazine Consumer Committee meeting in Anchorage. View tapes of programs and discuss interaction and format. Agree to allow ANM staff to do three experimental programs. Barrit meets with committee in closed session.

March 12-13, 1975 [C591]

ANM final Consumer Committee meeting in Anchorage. OT invites four utilization aides to participate. Group agrees that aides should be sending weekly reports to ANM staff and that ANM would be better served by a committee made up of utilization aides. Previous format restrictions on staff are waived to allow for more interesting programs.

ATTACHMENT #9

gical History: Recommendations about the use of site review teams.

1, 973 [C210]

(NIE) letter to Northrip (OT) to confirm site visit. Oct. 16 - Juneau; Oct. 17 - d Oct. 18 - Allakaket scheduled in th orthrip suggestions. Says visit is njunction with your request for support t a series of educational experiments on

6, 1973 [C212]

OE memo to Lind (DOE) reminding him g with Grayson (NIE) and a site review e purpose is "to see what we are doing un so they can decide whether or not s ney to continue;" suggests that NIE dden agenda" to save money by cutting hat DOE should support need for all ool programs, emphasize that the project to tudy the process of using satellites, s teractive capabilities.

2, 973 [C214]

(OT) letter to B. Moses (Allakaket Council) pologizing for bringing large group (NIE site team) to Allakaket on October most no notice and thanking the council ng with them; says the team had originally d to visit any villages, but he insisted ld since the project, for the most part, n experimentation in rural areas.

3, 973 [C216]

th OT-(Grayson (NIE) and Northrip and (OT) - reported by Wormwood (NIE) memo of f e. Discussed preliminary feedback re ew. NIE saw real management problems to being operational by April '75; continued need for Native input; and a month additional planning period tom tment with a shortened telecast time. ted that "Alaskan program should contain and summative evaluation to the extent ro iate for the successful implementa- e oject." Northrip indicated Buck ind (DOE) criticism of site team and he was "under considerable pressure a otest."

, 1973 [C217]

on conference call with Melmed, Grayson Northrip, Buck (OT). Northrip wants e FY '74 contract, assuming they a cost reimbursement basis. Mel- reports give them doubt work can time (summaries of site visitor reports soon to be sent out to GOT). Melmed states that one more review will be necessary before a commitment for the rest of the project can be made.

November 5, 1973 [C218]

Grayson (NIE) prepares "Composite Review" from reports of individual NIE site visit team members. Concerns include proposal needs and objectives; sites; Native involvement; programs; staffing; organizational relationships; production; residual effects; and management. Conclusions include: NIE should not commit funds as project is currently planned and managed; NIE should fund a limited planning phase to allow OT revision; NIE team would then review OT documentation, visit Alaska, and prepare recommendations; NIE funding decision could then be made about support through conclusion of the project. "In summary, the team found that OT's efforts on this project to date have been minimal with respect to the great amount of work to be accomplished, but do not auger well for a successful experiment. But, the needs of Alaska still exist. OT should be required to demonstrate that they can do the necessary work in the time available before NIE commits full funding to this project."

November 6, 1973 [C219]

Northrip (OT) letter to Morrill (HEW) thanking him for Oct. 31 meeting and saying that Melmed and Grayson (NIE) phone call on Nov. 2 may have made progress toward NIE-Alaska agreement. Suggests cost-reimbursement contract if necessary and reiterates that delays in major funding decisions are the only reason Alaska's ATS-F program is not further along.

November 14, 1973 [C220]

Pittman (KUAC) memo to Dowling, Upham, Williams (KUAC) reports that Northrip's (OT) phone call of Nov. 13 says he expects contract from Grayson (NIE) on Nov. 27th; that he has talked Grayson out of issuing another three-month planning grant and also has made it clear he will not try to superimpose a Native training program on top of what has already been planned. Program designers have not been picked, but will probably try to get the Featherlys for BOLD and ECE since they worked on the proposal. Says he needs to know if KUAC is still interested in production, and Pittman responded "to the extent possible" and pointed out the difficulties of current staff trying to work up speculative estimates of costs.

November 23, 1973 [C223]

Memo from Grayson (NIE) through Melmed and Wise to Glennan (NIE) on the status of the Alaska satellite project. Notes an agreement has been

reached with OT to support the project through June '75, subject to funds available and OT satisfactory development. Agreement also includes an on-site review about May '74; OT required to meet NIE-generated criteria of accomplishment; NIE's approval of subcontractors (finds UA and NWREL acceptable possibilities). Wormwood and Grayson to Juneau Nov. 27 to negotiate contract with OT.

November 26, 1973 [C225]

Madden (DOE) memo to Lind (DOE) says she has just received a copy of the NIE site team Composite Review and that it "reaches new heights (or depths) of unprofessionalism, inaccuracy, and gross irresponsibility," that it "exhibits zero understanding of the proposal as written and an arrogant assumption that 'nobody knows Alaska like NIE knows Alaska'."

Early December 1973 (or before) [C227]

Charlie (OT) letter to all ATS-F villages enclosing summary of project and explaining establishment of three Consumer Committees. Tentatively planning first meeting of BOLD and ECE for latter part of December or middle of January in Fairbanks. Requests name of a representative so that travel arrangements can be made.

April 29 - May 2, 1974 [C276]

NIE team makes second site visit to AK. (Schedule includes Ketchikan, Petersburg, Angoon, Juneau, Anchorage, and Fairbanks.)

May 30, 1974 [C284]

NIE reports "Composite Review" on (second) site visit for FY '75 funding proposal. Reviews progress on milestones determined as a result of first site visit. Positive comments on Native involvement through Consumer Committees. Generally negative comments on objectives; teacher training; program outlines; puppets; equipment; budget; and management, staff and coordination. Feels OT has given up too much responsibility to subcontractors and must manage, rather than just supervise the projec . Suggests continuation with modification including: removal of ECE; specifications on teacher training; production/design coordination; stringent reporting system; and removal of present director. "While the demonstration GOT is supervising is primarily communications-oriented, it is being funded by NIE and should have educational impact."

Mid-June 1974 [C294]

NIE/OT negotiation meeting in Washington, D.C. OT is informed that BOLD and ECE are to be dropped from the experiment. Grayson (NIE) agrees to a program review to be completed by August 30 with $100,000 added to FY 75 funding if review is favorable.

June 17, 1974 [C295]

Hartman (KUAC) notes on conversation with Hamilton (NWREL) in Juneau. Discussion of NWREL staff budget; that NIE may be asking Alaska to reverse the consumer committee input; that finally-authorized designs have not yet been turned over to writers; that KUAC and NWREL agree that Native legends should be shot on locations in village and double-used. "We need a team approach as NIE suggests. Not a spirit of 'friendly competition.'"

June 18, 1974 [C298]

"Alaska ATS-b Project Responses," provides OT's answers to first 30 modifications of the project suggested in the Composite Review of the April 29 - May 2 NIE site visit. (Does not respond to last 3 modifications which suggest that OT is too dependent on the sub-contracts with KUAC and NWREL; that the project should have educational impact; and that OT should begin managing rather than supervising.) Responses include support of ECE on basis of: (1) promises made to CC and (2) soundness of concept.

Late June 1974 [C309]

Northrip and Buck (OT) meet with Grayson and Wormwood (NIE) in Washington; Buck memo to Gov. Egan dated July 26 says this meeting was the first indication that NIE was contemplating cutting BOLD and ECE "...as a result of a site survey conducted by a group of visiting experts from the south 48 who expressed serious doubts about the quality and effectiveness of the programs." Says that as a result of their strenuous objections, Grayson agreed to a review of the two programs with results promised by Aug. 30 and $100,000 contingent upon results of the review.

June 28, 1974 [C310]

Northrip (OT) letter to Hartman (KUAC) with notice of no further in-studio production of ECE or BOLD until future notice. NIE decision due on or before Aug. 30.

July 1, 1974 [C312]

OT telecopy message to Grayson (NIE) listing "Criteria for Judging the Instructional Worth of the Designs" for BOLD and ECE and requesting telecopy confirmation of receipt. (Grayson confirmation dated July 3 added "the reviewer may use his own criteria.")

[redacted], 1974 [C319]

[redacted] (DOE) memo to Northrip (OT) concurring that [redacted] project review criterion is acceptable [redacted] in part, that the freedom for each evaluator [redacted] establish his own criteria is totally unacceptable and that, until there is agreement [redacted] what is to be evaluated, DOE feels there should [redacted] site review.

[redacted] 8, 1974 [C352]

[redacted] (OT) letter to Wormwood (NIE) requesting a [redacted] confirming that NIE has deleted the six-[redacted] ECE programs in order to document the change [redacted] to consumer groups prior to the next meeting.

[redacted] 9, 1974 [C354]

[redacted]on (NIE) letter to Buck (OT), "In response [redacted] your letter of July 31, the reduction of [redacted] proposed number of Early Childhood Education [redacted] was from 32 to 16 was in accord with our [redacted] discussions and agreements of June 25 - 27, [redacted] Your office since then has submitted [redacted] information on the 16 programs, and NIE [redacted] will make decision, no later than August 30, [redacted] whether or not to support the production of [redacted] TV programs."

[redacted], 28, 1974 [C373]

[redacted]on (NWREL) memo to Northrip (OT) on [redacted] evaluation of ECE by NIE. Speculation as to [redacted] review not favorable--noting ECE dropped [redacted] WNS also. Suggests if funds could be [redacted] ECE be considered for half-year. Says [redacted] initial for designs as initial work is [redacted] completed. Lists positive aspects of the [redacted] program as determined by CC.

[redacted]ber 5-6, 1974 [C386]

[redacted]er Committees for BOLD, ECE, and HE meet [redacted] jointly. Learn of NIE suspension of BOLD [redacted] and ECE over the summer. Resolution by ECE group [redacted] in favor of reinstatement is passed by combined [redacted] groups. Urges OT to seek substitute funding. [redacted] Recommend reinstatement in Jan. 1975. Tapes [redacted] first four HE programs are shown. BOLD [redacted] Committee learns about suspension of program [redacted] over the summer and reinstatement. Sees copy [redacted] of script #1 and learns that production will [redacted] begin immediately.

[redacted]ber 26, 1974 [C415]

[redacted] (OT) letter to Melmed (NIE) attaching resolu-[redacted] from combined Consumer Committee concerning [redacted] cessation of ECE. OT feels Consumer Committee [redacted] opposition will be even more critical if NIE cannot [redacted] push through on $55,000 on BOLD - a possibility [redacted] suggested by Grayson (NIE) earlier this month.

APPENDIX 2: SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

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